BENGAL
DISTRICT
GAZETTEERS

KHULNA

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GAZETTEER

OF THE

KHULNA DISTRICT.

CHAPTER I.

PHYSICAL ASPECTS.

GENERAL DESCRIPTION.

THE district of Khulnā, which forms the extreme south-eastern portion of the Presidency Division and of the Province of Bengal, is situated between 21° 38′ and 23° 1′ north latitude, and between 88° 54′ and 89° 58′ east longitude. It extends over an area of 4,765 square miles, including 2,688 square miles in the Sundarbans, and has a population, according to the census of 1901, of 1,253,043 persons. The principal town and administrative headquarters is Khulnā, situated on the Bhairab in 22° 49′ N. and 89° 34′ E. According to local tradition, the town is so called after Khullanā, a heroine of Hindu mythology, who dedicated to the goddess Kālī a shrine, called the temple of Khullaneswarī, on the bank of the river Bhairab about a mile to the east of the present town of Khulnā.

Boundaries.

The district resembles, in shape, an irregular parallelogram. It is bounded on the north by the district of Jessore, on the east by Backergunge and Farīdpur, on the south by the Bay of Bengal, and on the west by the 24-Parganas.

Natural configuration.

Taken as a whole, Khulnā is a low-lying fen country, occupying the central portion of the southern delta between the Hooghly and the Meghnā estuary, and intersected by a large number of rivers and estuaries, which again are connected by innumerable interlacing cross-channels. Its physical features are much the same as those of other deltaic districts. The country is flat, the surface being only slightly raised above flood-level; the banks of the rivers are higher than the adjacent land, so that the land sloping away from them on either side forms a series of depressions between their courses; and there are numerous marshes. The villages cluster along the banks of the rivers, but large

tracts are swampy, and the people who cultivate them are obliged to reside elsewhere.

Away from the villages the appearance of the country is that of a vast plain covered with rice, reed and rush, and broken here and there by clumps or lines of low trees fringing the banks of the streams. The river banks are high and have a prosperous appearance, but in the interior, where the lands are lower, the villages are poor and scanty. Rice grows in abundance, but in some places, where the *bils* or marshes do not dry up at any time in the year, there are extensive areas without a vestige of cultivation. The southern portion of the district exhibits the delta in a less advanced state of growth, covered with swamps and ending towards the coast in a network of sluggish channels and backwaters. The northern portion of this tract, however, is being fast encroached upon by the pioneers of cultivation, and the forest is being replaced by smiling rice fields.

Further to the south, lie the Sundarbans, a desolate tract only 12 to 30 inches above high tide level, in which the slow process of land-making has not yet ceased. This tract is intersected throughout by large rivers and estuaries running from north to south. These are connected with each other by an intricate series of branches, and the latter in their turn by innumerable smaller channels, so that the whole tract is a maze of waterways enclosing a large number of islands of various shapes and sizes. Approaching the sea, the general level of the surface rises very gradually, until, reaching the outer islands, it is above ordinary high tide level. This is caused by the silt, which, during the south-west monsoon, and especially during the months of May and October, is deposited by the heavy swell, which, coming in from the Bay of Bengal, flows for several miles inland, and floods the most exposed islands.

Natural divisions.

Though the general appearance of the district is that of a low alluvial plain, it may, for practical purposes, be divided into four parts. In the north-western portion the land is well raised, and is ordinarily above flood-level. Its population is fairly dense, and the surface is diversified by groves of date palms and plantations of mango and other trees on the outskirts of the villages:—indeed, nearly every village is surrounded by a fringe of orchards.

In the north-eastern portion, from the boundary line between Jessore and Khulnā down to the latitude of Bāgherhāt, the land is low and covered with swamps, the population is sparse, and the only places suitable for dwellings are the high lands along the banks of the rivers. The river Jamunā, with its continuation,

the Kālindī, and the Kholpetuā and Kabadak, with their tributarise, all traverse this part of country the and debouch into the Bay of Bengal, with numerous tortuous waterways as connecting links between them. From December to the end of June, the river water, as a rule, remains brackish, but after the rains have set in, the salt water is usually driven beyond the limits of cultivation by the volume of the fresh rain water and drainage coming down. The river banks are almost invariably higher than the land they enclose, and are cut up by numerous little inlets, by which the water penetrates to the lands within.

The central portion is also low-lying, but has now been brought under habitation and cultivation, groves of betel-nut and tanks being abundant. Towards the south, where this tract begins to merge in the Sundarbans, are the clearances made by the pioneers of cultivation. Here there are few or no villages, properly speaking; that which is marked in the map as a village is perhaps only an expanse of rich rice land, with a few cultivators' houses scattered here and there. Everything is subordinated to rice cultivation, so that hardly a tree is left, and people live, not in villages, but far apart among hetir rice-fields. Sluggish creeks (*khāls*) and rivers wind about among the rice clearings, and their course can be traced by the fringe of brushwood that lines their banks.

Further south, nearer the sea, is the Sundarbans tract, a region of morasses and swampy islands, most of which are clothed with a dense evergreen forest, while some are covered with salt water at flood tide.

General conditions.

When this part of Bengal was surveyed by Major Rennell between 1764 and 1772, the banks of two of the oldest rivers, the Kabadak and the Bhairab, appear to have been the only habitable tracts above the general level of the swamps west of the Baleswar. That the latter have recently been raised by natural action, admits of no doubt, for, during the time which has since elapsed, the banks of numerous other streams and creeks intersecting the swamps and connected with the principal distributaries of the Ganges have been gradually raised, with the assistance of human industry, above the general level of the marshes, and are now bordered by villages and hamlets. A comparison of Rennell's map with that made nearly a century later in the course of the revenue survey of 1858–64, will show that cultivation and villages now exist where a century ago all was waste. This change is most noticeable over the whole of the old marshy tract west of the Kabadak down to its junction with the Kholpetuā.

At the same time, ancient ruins discovered from time to time in making new settlements seem to shew that portions of the district which are now being reclaimed were formerly inhabited. Various theories, such as the inroads of pirates, the devastation caused by cyclones, and the inrush of irresistible storm-waves, have been put forward to account for the extinction of the villages and the abandonment of the land. A more reasonable explanation has been suggested by Dr. Thomas Oldham, which so clearly illustrates the general physical aspects of this deltaic tract that it may be quoted at length.

"I suppose no one will hesitate to acknowledge that the whole of the country, including the Sundarban proper, lying between the Hooghly on the west and the Meghnā on the east, is only the delta caused by the deposition of the debris carried down by the rivers Ganges and Brahmaputra, and their tributaries. It is also equally well known that in such flats the streams are constantly altering their courses, eating away on one bank and depositing on the other, until the channel in which they formerly flowed becomes choked up, and the water is compelled to seek another course. It is also certain that in this peculiar delta the general course of the main waters of the Ganges has gradually tracked from the west towards the east, until of late years the larger body of the waters of the Ganges have united with those of the Brahmaputra and have together proceeded to the sea as the Meghnā. Every stream, whether large or small, flowing through such a flat, tends to raise its own bed or channel, by the deposition of the silt and sand it holds suspended in its waters, and by this gradual deposition the channel bed of the stream is raised above the actual level of the adjoining flats. It is impossible to suppose a river continuing to flow along the top of a raised bank, if not compelled to do so by artificial means, and the consequence of this filling in and raising of its bed is that, at the first opportunity, the stream necessarily abandons its original course, and seeks a new channel in the lower ground adjoining, until after successive changes it has gradually wandered over the whole flat and raised the entire surface to the same general level. The same process is then repeated, new channels are cut out, and new deposits formed.

"Bearing these admitted principles in mind, look to the delta of the Ganges and Brahmaputra. The Ganges river emerging from its upper levels round the Rājmahāl Hills, and prevented by their solid rocky barrier from cutting further to the west, sought its channel in the lower ground adjoining, and originally the main body of its waters flowed along the general

course now indicated by the Bhāgīrathī and Hooghly. But gradually filling up this channel, it was again compelled to seek a new course in the lower, because as yet comparatively unfilled-in, ground lying to the east. And, the same process being repeated, it wandered successively from the rocky western limit of the delta-flat towards the eastern. If this progress eastwards was allowed to be sufficiently slow to admit of the gradual filling in of the country adjoining, the delta was formed continuously up to the same general level, and the larger streams or channels passing through this flat to the sea became unavoidably diminished in size, and in the quantity and force of the water they carried, the main body passing around further to the east, and having its course in the channels successively formed there. I need not here point out the successive stages in the formation of the delta, or shew how these have been exactly paralleled by similar changes in the course and deposits of the Brahmaputra and the other rivers which unite with the Ganges. We are at present concerned rather with the results arising from these changes as affecting the existence and distribution of population.

"The very first necessity for the existence of man is the presence of drinkable sweet water. Where this cannot be procured, it is certain that man can make no settlement, and it is equally certain that the removal or destruction of the sources of supply of this necessary element of existence will compel him to abandon his abode, and change his habitation. We have not to go beyond the delta of the Ganges itself to see the application of these facts in explanation of the former history of the Sundarban. The more modern courses of the large rivers give us a patent illustration of the successive conditions of all. To the east where now the great body of the waters of these rivers is discharged, we find the force of the fresh water sufficient to overcome the strength of the tide, and the influx of salt water from the sea. And down to the very mouths of the rivers here, fresh water (often for hours in the day flowing over a basis of salt water beneath) can readily be procured. The consequence is that towns and villages line the banks of every stream, and population and cultivation follow the course of this, the prime element of their existence. To the east, as we have said, the filling in of the delta has not yet reached the same level as to the west, and the fresh waters here retain sufficient power, therefore, to be carried down to the sea. In earlier times, precisely similar conditions must have existed further to the west; the larger portion of the river waters found their exit through the channels there, and were thus in sufficient force to be carried

down to the very sea; and the natural consequence of this was that man fixed his abode where he could procure fresh water, towns and cities arose, and taking advantage of the great facilities for trade offered by their position, increased in importance and number, until the necessary changes in the course of the streams which supplied them deprived them of the possibility of existence. That this is the natural interpretation of the facts, appears to me abundantly evidenced by the circumstance that within this abandoned tract and in its vicinity, at the present day, when the swarming population is seeking utility for settlement in every direction, not a single spot finds its settler, save where fresh water is to be had; and the traveller may go for days or weeks through the countless anastomising creeks and channels of the tidal Sundarban, without finding a single abode, whereas the moment he reaches any spot where fresh water is obtainable, he finds cultivation spreading and the population increasing . . .

"I feel convinced, therefore, that there is no necessity to resort to any fancied effects of cyclone-waves, of the inroads of pirates, or the persecution of other peoples, to account for the occurrence at the present time of ruins in the Sundarban. Cyclone-waves and persecution and robbery do not drive men from their abodes near the sea-board now, though they may cause vast destruction of property and produce great suffering. Nor would these causes, as I believe, have sufficed in earlier times to produce the same result. Doubtless they may have diminished the pang with which the settler abandoned the homes in which his family had grown round him, but unless combined with the far more general and more unavoidable compulsion of the want of water, I believe that, however they may have affected individuals, they would have been powerless to induce communities to abandon positions favourable for trade, and for the acquirement of wealth."*

This theory may be confirmed by a concrete instance, that of the village of Gobrā on the Kabadak. According to tradition, cultivation once extended along the eastern bank of the river far below Gobrā, and in its neighbourhood Colonel Gastrell found ruins of masonry buildings, traces of old courtyards and some garden plants or shrubs. Regarding these remains he writes :—"By whom the buildings were erected, or when inhabited, no one seems to know. In those days, probably, the Kabadak communicated at all seasons of the year directly with the Ganges; its water would then have been fresh instead of brackish, as it is at present; and there would have been every

* Proceedings, Asiatic Society of Bengal, 1870, pp. 47-51.

prospect, also, of its banks being still further raised and consolidated. The temptations, therefore, held out to men to extend cultivation in that direction must have been as great as they are at present on the banks of the other fresh water rivers of the delta. But long before Rennell's day other streams had interfered with and cut off the Kabadak from the Ganges, and left it what it now is, a mere tidal creek with no headway of fresh water. Fresh deposit on its banks must then have ceased to a great extent; the rains would gradually have washed away the upper stratum of soil, and lowered the general level; the place would soon have become sickly, and finally forsaken by all but those whom dire necessity kept chained to the spot. Of all the villages that may once have existed over this portion of the district, the miserable village of Gobrā alone remains. The area of this village has also decreased, and the cultivation of rice does not extend to within two miles of where it once did. The soil is gradually becoming more and more impregnated with salt and unfit for crops; and were it not for embankments, and the fresh water that drains into and passes down the Kabadak in the rains helping to wash out the salt of the soil near the banks, Gobrā would soon be deserted also."

RIVER SYSTEM.

Four great rivers, connected by numerous cross channels and known by a confusing multiplicity of names in different portions of their courses, gradually find their way through the district by a southerly route to the sea. On the extreme west is the Jamunā flowing from north to south, and further to the east the Kabadak runs almost parallel to it. The Bhairab and its continuations traverse the centre of the district, while the eastern boundary is formed by the Madhumatī. In the south there is a labyrinth of rivers, all tending, however, towards a number of outlets, such as the Raimangal, Mālanchā, Marjātā and Haringhātā, each of which is large enough to be called an arm of the sea. The other rivers of the district are, with few exceptions, branches of the rivers mentioned above.

Between the larger rivers and estuaries, are numerous streams and watercourses, called *khāls*, forming a perfect network of channels, and ending ultimately in little creeks, which serve to drain off the water from the depressions between the larger rivers. Each of these depressions being shaped like a basin, with high ground along the banks of the waterways surrounding it, water accumulates in them and is drained off by a small *khāl* into the larger *khāls*, and ultimately into the rivers. Conversely, when the water swells in the rivers, it floods the country through the same channels. Many of

the *khāls* connect two large ones, and consequently the tide flows into them through both ends: such *khāls* are called *doāniyā khāls.* They are very useful as affording communication between the larger *khāls*, but have one serious defect in that they are liable to silt up at the point where the two tides meet.

The main rivers entering the district from the north, from the Jamunā on the west to the Madhumatī on the east, are offshoots of the Ganges, by which they were originally fed. Owing, however, to the raising of their beds in their upper reaches, the current of the Ganges is deserting them, and is being deflected further and further to the east. The Madhumatī alone continues to bring down any great quantity of the Ganges water to the sea, and the other main rivers serve chiefly as lines of drainage to carry off the local surface water. They were at one time great waterways with a good depth of water even in dry seasons, and during the rains carried down a large volume of flood water. But, one by one, their heads have closed up, and the lower reaches have consequently deteriorated. Even as late as 20 or 30 years ago the principal rivers still conveyed fresh water through the district until they entered the Sundarbans; but now there is scarcely a river that does not become brackish in the dry season, and saline water forces its way far inland.

The result is that only in part of the district is the land being elevated by the deposit of the river silt carried in suspension in flood water, viz., to the east, where the Ganges water finds an outlet by the Madhumatī and other channels. Elsewhere, this process of land raising is in suspension, as the watercourses now receive no flood water from the Ganges, and their channels are far too large for their function as receptacles of the local drainage. The very small slope, which is characteristic of the country, tends to cause them to become choked with aquatic vegetation, and to take the form of long canals in which the flow of water is extremely sluggish. It is only the connection with the parent stream, however, which has been closed or silted up, and the channels are quite competent to receive local drainage and convey it to tidal waters. The following is a brief account of the principal rivers proceeding from west to east.

Jamunā. To the extreme west, the Jamunā or Jabunā, flowing southwards from Jessore, first touches on the district at Chānduriā, and then flows south-west through the 24-Parganas. It re-enters Khulnā at Rādhānagar on the confines of the Kālīganj thāna, and then keeping a southerly course forms the boundary between this district and the 24-Parganas as far as Basantpur. Here it bifurcates, one branch, called the Kālindī, forming the boundary of the district

down to the sea, while the parent stream pursues a south-easterly direction through the interior, being joined by the Kānksiāli *Khāl* near Kālīganj. After throwing off, at Iswarīpur, a small stream called the Ichhāmatī, it continues its southward course, winding through the forests and swampy islands of the Sundarbans, till it finally empties itself into the Raimangal, a short distance from the place where that estuary debouches into the sea.

The Jamunā has now silted up from below Kālīganj to a short distance above Nakipur, and its bed has been brought under tillage. It is also silting up in its upper reaches, and large shoals are being formed between Tākī-Srīpur and Debhātā. It is still navigable, however, all the year round by large boats in the upper portion of its course, which forms part of the inner boat route between Husainābād and the Kānksiāli *Khāl*. The principal places along its banks are Srīpur, Debhātā, Kālīganj and Iswarīpur.

This river, which is also called the Jabunā, is known in the upper portion of its course as the Ichhāmatī, a deltaic distributary of the Ganges, and was probably at one time one of its main outlets when it was forcing its way eastwards.

Ichhāmatī. The branch which the Jamunā throws off at Iswarīpur is also known as the Ichhāmatī, but after a few miles it takes the name of Kadamtalī and flows through the Sundarbans till it empties itself into the Mālanchā river shortly before it falls into the sea.

Sonai. The Sonai is another offshoot from the Ichhāmatī or Jamunā, which flows first in a south-easterly and then in a south-westerly course till it falls into the Balli *Bil*. This river has almost entirely silted up at its head.

Kānksiāli. The Kānksiāli is a tributary of the Jamunā, which now forms part of the main boat route between Calcutta and Eastern Bengal, and is practically a canal. The name of this river has been Anglicised as Coxeali.

Kālindī. The Kālindī, which as above stated branches off from the Jamunā at Basantpur, flows in a southerly direction throughout the Sundarbans and falls into the Raimangal, a considerable distance above the point of junction between that river and the Jamunā. It is a wide stream with an average breadth of 400 feet, and is much used by country boats of heavy burthen coming from Eastern Bengal, which cannot follow the route by Husainābād to Calcutta.

Kholpetuā. The Kholpetuā is a river branching off from a multiplicity of other streams, but receives its waters principally from the Kabadak near Asāsuni. It first keeps a westerly direction for a short distance, being called the Moruchar in this portion of

its course, and after receiving the waters of the Budhhātā Gāng (also called the Betnā), turns to the south till it is joined by the Galghasiā. The united river then flows through the Sundarbans till it rejoins the Kabadak, a few miles above the place where that river in its turn empties itself into the Pāngāsī. The Kholpetuā attains a great breadth after it is joined by the Galghasiā, the width of the channel increasing from 150 to 600 yards in a length of 16 miles. It is navigable all the year round by large boats, and forms the outer route for boats of heavy burden between Eastern Bengal and Calcutta. The name Kholpetuā means the death-bellied river and has been Anglicised as Culputtooa or Calpotua. It is also sometimes called the Golpetuā.

Betnā. The Betnā enters the district from Jessore near the village of Pānkauri, and flows generally in a southerly direction till it falls into the Kholpetuā. It is an offshoot of the Kabadak, and is also called the Budhhātā Gāng from a village of that name near its mouth.

Galghasiā. The Galghasiā is formed by the junction of the Wazirpur Kātā *Khāl* and Guntiākhāli, and flows in a south-easterly direction till it falls into the Kholpetuā opposite the village of Kalyānpur. The Wazirpur Kātā *Khāl* forms part of the route for heavily laden boats proceeding from Calcutta to the eastern districts; and the Galghasiā forms one of the passages for the large Sundarbans wood boats. Both are deep rivers, and have an average breadth of about 200 yards. The Guntiākhāli is a branch of the Sobnāli river, which it joins at Asāsuni. It runs a south-westerly course until it falls into the Bānstolā *Khāl*, thence continuing its course as the Galghasiā. As the tide comes into it from both ends, from the Kabadak and the Kholpetuā, it silts up quickly and requires to be cleared periodically in order to keep it navigable by large boats. This channel is more generally known as Asāsuni *Khāl*.

Sobnāli. The Sobnāli is so called from its passing the large village of that name and is also known as the Bengdaha or Kundariā Gāng. It takes its rise from a number of small watercourses in the Bairā *Bil* or marsh near the village of Balliā (Balitā), and flows in a south-easterly course till it reaches Asāsuni, where it joins the Marichhāp, which is one of the principal boat routes between Calcutta and Eastern Bengal.

Kabadak. The next large river is the Kabadak, which formerly flowed from the eastern-bend which the Māthābhāngā makes near Matiāri in the Nadiā district, now a semi-circular lake on the east of the Eastern Bengal State Railway. From this bend the Kabadak flowed eastward to Kotchāndpur on the borders of Nadiā and thence southwards to the sea; but the bend has silted up, and

the Kabadak has altogether lost connection with the Māthābhāngā. It first touches on Khulnā near Chaklā, a short distance from Tirmohinī in Jessore. It then forms for some distance the boundary between the Khulnā and Sātkhirā subdivisions, and for the rest of its course is a large tidal stream. In its upper reaches, its numerous windings render navigation tedious, but it is navigable for despatch steamers as far as Tirmohinī. It crosses the outer boat route at Chāndkhāli, and passes the markets of Tālā, Kapilmuni, and Kātipārā.

Five miles east of Asāsuni the Kabadak is joined by the Marichhāp Gāng, which communicates with the series of passages and canals leading to Calcutta; and two miles below this junction it sends off the Chāndkhāli *Khāl* eastwards, continuing the boat passage through this district towards Dacca. Further to the south the Kabadak unites with the Kholpetuā, and the combined stream then takes the name of the Pāngāsī, Naingod, Samudra, Bara Pāngā, and, near the sea, Mālanchā, under which name it falls into the Bay of Bengal. It is also known as the Kabodak or as the Kapotāksha or dove's eye, a picturesque name suggested apparently by its placid stream.

Bhairab. The Bhairab enters the district from the north near Phultalā and flows in a south-easterly course to Khulnā. It then passes to the south, discharging a great part of its water into the Rūpsā or Passur, while the main channel runs to the south-east past Fakīrhāt and Bāgherhāt, and joins the Madhumatī at Kachuā. At Jātrāpur, halfway between Bāgherhāt and Fakīrhāt, the river makes a horse-shoe bend some 4 miles long, and here a cut has been made through the neck by the Public Works Department, thus shortening its course considerably. The Bhairab formerly issued from the Kabadak and was the central stream of Jessore, but its head silted up about the end of the 18th century, and it has now become practically a dead river, to use the expressive vernacular term.

The portion flowing through Khulnā was formerly navigable all the year round by large boats. Within the last decade, however, the channel between Alāipur and Mansā, where it assumes the name of Alāipur *Khāl*, has been silting up fast, thereby closing the inland steamer route from Khulnā to Bāgherhāt and thence to Barisāl. Two attempts made by the Public Works Department to re-establish communication by excavating its bed failed, and the project has been abandoned. The *khāl* is still navigable by boats at high tide; and it is proposed to keep it open by dredging periodically. It is worthy of note that the Bhairab and its parent stream, the Kabadak, are the

rivers on the banks of which the residences of the better classes are mostly built; and its name, which means the terrible, shews the estimation in which it was once held.

Athāra-bānkā. Near Khulnā the Bhairab is joined by the Athārābānkā, *i.e.*, the channel of 18 bends, a cross-stream which conveys the surplus waters of the Madhumatī into the Bhairab. It forces down such a volume into the Bhairab that the bed of the latter stream no longer suffices for its exist southward; and the Bhairab itself turns backwards at Alāipur, till it finds an outlet for its surplus water in the Rūpsā river. The Athārabānkā is 200 yards wide in the rains, and is navigable all the year round by large cargo boats and inland steamers. It is also called locally the Athārabenki.

Rūpsā. The Rūpsā river was originally a channel cut by one Rūp Sāha, which served as a canal till the water of the Athārabānkā forced its way along it and made it one of the largest tidal *khāls* of Khulnā. It flows from north-east to south-west from the Bhairab at Khulnā to the Kāzibacha river, a distance of 8 miles. It is 350 yards wide during the rains, and is navigable throughout the year by inland steamers and large country boats.

Bhadrā. The Bhadrā enters the district at Baratiā and continues in a south-easterly direction to the Sundarbans. Below Kesabpur it widens out, and in this portion of its course it forms a large tidal stream.

Madhu-matī. The Madhumatī is the largest river in Khulnā and is, in fact, one of the principal distributaries of the Ganges in Bengal and Eastern Bengal. It leaves the parent stream near Kushtiā in Nadiā, where it is called the Garai, and thence flowing south, assumes the name of Madhumatī, meaning the honey-bearing river. It enters the district near its north-east corner at Mānikdaha, and from this point it takes the name of Baleswar, meaning the lord of strength, and forms the eastern boundary of the district still flowing south, but with great windings in its upper reaches. It then crosses the Sundarbans, separating the Khulnā from the Backergunge portion of that tract, and enters the Bay of Bengal after a course of 230 miles, under the name of Haringhātā, meaning the watering place of deer. The river, which here forms a fine estuary, 9 miles broad, is navigable to opposite Morrellganj by sea-going ships, and throughout its entire course by native boats of the largest tonnage. Its principal tributary in this district is the Bhairab.

Cross-channels. The principal cross-channels are the Sibsā (or Sipsā), Bosekhāli *Khāl*, Deluti and Chitrā. The Sibsā river and Bosekhāli *Khāl* flow from east to west connecting the Deluti with the Kabadak. They are 9 miles in length, have a breadth of 270 yards in the rains,

and are navigable by large boats all the year round. The Deluti river runs from north-east to south-west extending from the Bhadrā to the Sibsā. It is 5 miles in length, 160 yards wide during the rains, and navigable all the year round by large boats.

There are two rivers called Chitrā. Chitrā I flows from north-west to south-east extending from the Kharagdaha to the Athārabānkā river, a distance of 94 miles. It is 60 yards wide in the rainy season, and is navigable for 3 months of the year by small boats as far as Khajurā; below this point it is navigable all the year round by small boats, and by larger craft during the rainy season. Chitrā II also runs from north-west to south-east, leaving the Athārabānkā at Nagarkandī and emptying itself into the Madhumatī at Chitalmāri. It is 22 miles in length, is 80 yards wide during the rains, and is navigable all the year round by medium-sized passenger or cargo boats.

Sundarbans rivers.

The rivers coming down from the north throw off numerous branches, which, interlacing with each other, form a network of islands, especially towards the coast, where they broaden out into large estuaries subject to tidal action. The interlacings are so numerous and complicated, and the swamps in which the channels lose themselves or merge with other streams are so perplexing, that it is impossible to give a detailed, and at the same time intelligent, account of the river system. The whole country is, in fact, a labyrinth of rivers and watercourses, connected by innumerable distributaries, which, after endless bifurcations and interlacings, unite into large estuaries falling into the Bay of Bengal. The principal of these arms of the sea, proceeding from west to east, are the Raimangal, Mālanchā, Bara Pāngā, Marjātā, Bāngrā and Haringhātā. The other large rivers of the Sundarbans, which are connected with those above mentioned, are the Passur (also called Pussur or Pusur), Bishkhāli, Thākurān, Kabadak, Hāriābhāngā, Kholpetuā, Ichhāmatī, Sibsā, Bhadrā and Bholā. The minor rivers are innumerable, and are simply channels or cross-channels of the above rivers.

Estuaries.

The sea coast is fringed by a belt of low-lying swamp and uninhabited jungle extending for many miles inland. From the land side the shore shelves out gradually, but in front of it numerous unbuoyed reefs extend for 18 to 30 miles seawards. The whole coast is full of breakers, and is consequently difficult of approach except by a few tortuous channels. It is intersected by numerous estuaries, but their mouths are often obstructed by sand bars, which effectually prevent the passage of vessels of any size. The following is a brief account of the principal estuaries proceeding from west to east.

Raimangal. The westernmost estuary in Khulnā is the Raimangal, which from Kālīganj downwards marks the boundary between this district and the 24-Parganas. It is formed by the junction, about 6 miles from the sea, of three rivers, viz., the Hāriābhāngā to the west, the Raimangal river in the centre, and the Jamunā to the east. It is navigable by small craft all the year round.

Mālanchā. Four to six miles eastward of the Raimangal is the Mālanchā estuary, and a few miles farther to the eastward is the Bara Pāngā, having its channel separated from the former by Pātnī island. An extensive reef or flat stretches out 3½ or 4 leagues from this island, on which the ship *Falmouth* was lost in 1766. Due south from the Raimangal and Mālanchā rivers is the "Swatch of no ground." This consists of a great natural depression or hole in the Bay of Bengal, of which a description will be found in Chapter XV. The name Mālanchā has been Anglicized as Mollinchew.

Marjātā. The next estuary is the Marjātā river, situated 2½ or 3 leagues to the eastward of Pātnī island. It has a wide entrance, about 4 or 5 miles, inside which are two islands, called the Pārbhāngā islands. On the reefs bounding the channel leading to this river the ship *Berkshire* was lost in 1771. About 10 miles east-north-east from its mouth is a much smaller estuary called the Bāngrā.

Haringhātā. The Haringhātā, the easternmost estuary in Khulnā, is situated about 15 miles north-east of the Bāngrā. It has a very spacious entrance, about 9 miles wide, between two great banks, which project from the land on each side. Although there is a bar at the mouth with only 17 feet of water at low tide, the navigation is easier than that of any other river at the head of the Bay of Bengal. The great banks or shoals, which have formed at each side of the mouth and extend seaward for several miles, protect the entrance, and act as breakwaters to the swell. The stream is not disturbed by the "bore," which visits the Hooghly and the Meghnā, and it is also free from mid-channel dangers. It serves as the outlet of Morrellganj, a town situated on one of its branches, the Pāngāsī, about 50 or 60 miles from its mouth. This place was declared a port in 1868 for shipping and landing goods during the north-east monsoon; but failed to attract trade. Steamers of the Inland Steam Navigation Companies, however, call there, and a fair trade in rice and betel-nuts is carried on.

LAKES AND MARSHES. One of the most characteristic features of Khulnā is the large number of marshes called *bils*. Many are of small size, but others are practically shallow inland lakes. Some are mere

accumulations of water upon low-lying ground, while others are natural drainage basins, the level of which does not admit of drainage. Their formation is due to the configuration of the district, which is divided by the interlacing of the rivers into what are practically islands. Each of these is bounded by rivers, and the highest level is along their banks, so that the fall from all directions is towards the centre, which again is drained by a creek or *khāl*, communicating with one of the surrounding rivers. In some places, the basin thus formed is on a fairly high level, and the central depression, being sufficiently high to be above water, at least during some months of the year, is used for growing crops. Other such depressions are water-logged, but can still be used for growing rice; while others again are inland lakes always under water and cannot be utilized for cultivation. The latter are known as *bils* or *jhils*, and are exceptionally numerous in Khulnā, the principal *bils* being 24 in number and having an area of 292 square miles. The largest of these is the Bairā *Bil*, situated on the east of the Jamunā river in Buran *pargana*, which extends over 40 square miles; bu tthe greater part of the *bil* is now under cultivation. Other large *bils* are the Dākātiā, Pablā, Shāhpur, Korāmārā, Dhunkhain, Kutahe, and Danobhāngā. Besides these marshes, large accumulations of water, called *baors*, are found in the deserted beds of rivers, among which the Khura and Srīrāmpur *baors* are noticeable.

The soil of the district is composed of recent alluvium and the most remarkable fact connected with its geological formation is there are reasons for believing that there has been some subsidence of the country. This theory is confirmed by the discoveries made 50 years ago by Colonel Gastrell, who wrote:— "What maximum height the Sundarbans may have ever formerly attained above the mean tide level is utterly unknown; that they ever were much higher than at present is, I think, more than doubtful. But that a general subsidence has operated over the whole extent of the Sundarbans, if not of the entire delta, is, I think, quite clear from the result of examination of cuttings or sections made in various parts where tanks were being excavated. At Khulnā, about twelve miles north of the nearest Sundarban lot, at a depth of eighteen feet below the present surface of the ground, and parallel to it, the remains of an old forest were found, consisting entirely of *sundri* trees of various sizes, with their roots and lower portion of the trunks exactly as they must have existed in former days, when all was fresh and green above them; whilst alongside them lay the upper portions of the trunks, broken off and embedded in a thick stratum of old half-decomposed GEOLOGY.

vegetable mould nineteen inches in depth, from which, when first exposed, leaves, grasses and ferns could readily be separated and detached. Below this were other thinner strata of clays and vegetable mould corresponding to the Calcutta peat, whilst above was a stratum of argillaceous sand passing into stiff blue clay containing numerous shells. One of the trees was found projecting far into the upper stratum of blue clay. Many of the trees were quite decomposed, whilst in others the woody fibre was nearly perfect."

That this subsidence of the surface of the ground is not confined to the Sundarbans, seems to be confirmed by the fact that stumps of trees have also been found at Sealdah in Calcutta, at various levels down to a depth of 30 feet, or 10 feet below the peat. These trees also were pronounced by the Superintendent of the Botanical Gardens to be *sundrī*, a tree which never grows to within six or eight feet of the lowest tide levels. It grows only on mud, or where the surface is not too frequently flooded to allow of the growth of grass; but, at the same time, it requires that its roots be exposed to the air for at least several hours of each tide. If the present level of their roots could suddenly become the level of the country, the whole of the Sundarbans at least would be under water; and it appears therefore that the deltaic tract stretching from Khulnā to Calcutta must at some time have undergone a subsidence. The following evidence in support of this view may be quoted from the *Manual of the Geology of India* by R. D. Oldham (1893).

"The peat bed is found in all excavations round Calcutta, at a depth varying from about 20 to about 30 feet, and the same stratum appears to extend over a large area in the neighbouring country. A peaty layer has been noticed at Port Canning, 35 miles to the south-east, and at Khulnā, 80 miles east by north, always at such a depth below the present surface, as to be some feet beneath the present mean tide level. In many of the cases noticed, roots of the *sundrī* tree were found in the peaty stratum. This tree grows a little above ordinary high-water mark in ground liable to flooding, so that in every instance of the roots occurring below the mean tide level, there is conclusive evidence of depression. This evidence is confirmed by the occurrence of pebbles, for it is extremely improbable that coarse gravel should have been deposited in water 80 fathoms deep, and large fragments could not have been brought to their present position unless the streams, which now traverse the country, had a greater fall formerly, or unless, which is perhaps more probable, rocky hills existed which have now been covered up by alluvial deposits.

The coarse gravels and sands, which form so considerable a proportion of the beds traversed, can scarcely be deltaic accumulations, and it is therefore probable that when they were formed, the present site of Calcutta was near the margin of the alluvial plain, and it is quite possible that a portion of the Bay of Bengal was dry land."

As regards the cause of this subsidence various theories have been propounded. One writer, in an article published in the *Calcutta Review*, ascribes it to the weight of the superincumbent earth and forest. "If," he says, "we consider the unsubstantial nature of the foundation of the Sundarbans, which, at a distance of only 120 feet from the surface, consists of a bed of semi-fluid mud 40 feet in thickness, and then remember the terrific convulsions that have at different periods shaken the delta to its deepest foundations, we must not be surprised to find that the liquid mass, unable to support the superincumbent weight, has repeatedly bulged out seaward, reducing the level of the delta, submerging whole forests, together with their fauna and flora."* Colonel Gastrell again considered that, though the general depression may have been caused partially in this way, it was more probable that it was caused suddenly during some great earthquakes. "The fact of all the trees being, as a rule, broken off short, and none being found standing at Khulnā or Sealdah, might in that case be accounted for by the enormous wave that in such a subsidence would have rolled in from the Bay over the Sundarbans, destroying all in its path. Or supposing the subsidence not to have been general over the whole tract at first, and only sufficient to have submerged the roots below low-tide level, and so killed them, all would have dried up as they stood, and succumbed to some one of the cyclones that must have subsequently swept over the tract. The latter assumption seems likely, because, whilst at Khulnā and Sealdah the trees were all broken short off close to the ground, at Mātlā, which is situated between these places, they are said to have been found intact and unbroken, which could not have been the case had a great wave, caused by the sudden subsidence of the country, swept in from the Bay over the sinking forests; in that case, Khulnā, Mātlā, and Sealdah, supposing the submergence general, would have been exposed and suffered alike, and the trees would have been equally decomposed in all places. The fact of their not being so, seems to clearly show that the subsidence at Khulnā was prior to that at Mātlā, as in the first place the trees were mostly decomposed, while in the

* *The Gangetic Delta*, Calcutta Review, 1859.

second they were not so. All is pure conjecture, however, and the causes may have been very different."

BOTANY. In the north-west of the district there are extensive groves of date-palms especially on the outskirts of villages. The north-east and centre of the district are generally inundated during the rainy season, only the river banks and the artificial mounds on which habitations are situated rising above the fresh water sea that results. These elevated embankments are, where not occupied by gardens, covered with a scrubby jungle of semi-spontaneous species, from which rise bamboos, betel and cocoanut palms with a few taller trees. The surface of the marshes shows either huge stretches of inundated rice or is covered with matted floating islets of sedges and grasses and various water lilies.

In the Sundarbans tract a different class of vegetation is found. The portion nearest to the sea, an intricate system of sea-creeks and half-formed islands, densely clothed with a tidal forest of a purely Malayan type, separates itself spontaneously from the alluvial rice plain to the north, where the river banks at least are higher, where tanks can be dug that will retain fresh water, and where only the larger streams are much affected by the tides. This dense forest forms the compact and natural Sundarban province, filled with species to be met nowhere else in Bengal save along the southern coast of Chittagong, and, to a minor degree, in the delta of the Mahānadī.* In the evergreen forest covering the islands various mangroves hold first place, with an undergrowth of climbers and herbaceous plant. Two gregarious palms are conspicuous, the *Nipa fruticans* in the swamps and on the river banks, and the *Phœnix paludosa* in drier localities. The former is a low stemless palm, which throws up pale yellow-green tufts of feathery leaves, often 30 feet long, and bears a large head of nuts. The latter is a dwarf slender-stemmed palm, which covers the whole landscape with a carpet of feathery fronds of the liveliest green, presenting so dense a mass of foliage, that when seen from above, the stems are wholly hidden. A remarkable feature of the estuarine vegetation is the habit of several of the endemic species, *e.g.*, *Heritiera*, *Amoora*, *Sonneratia* and *Phœnix paludosa*, to send up from their subterranean roots a multitude of aerial root-suckers, in some cases several feet long, which act as respiratory organs.†

The following account of the flora of the Sundarbans has been contributed by Lieutenant-Colonel D. Prain, I.M.S.

* D. Prain, *Bengal Plants*, Calcutta, 1903.

† *Imperial Gazetteer of India*, Vol. I, pp. 182-184.

The flat swampy islands surrounded by interlacing creeks and channels in the lower delta are covered with dense forest. The most plentiful and important species is *sundrī* (*Heritiera minor*), which is of larger size and forms a purer forest where the water in the channels is least brackish. Associated with *sundrī* are species of *Amoora*, *Excœcaria*, *Carapa*, *Avicennia*, *Cynometra*, *Intsia* and *Dolichandrone*. On the banks of creeks and rivers are two species of *Sonneratia*, a *Carapa*, a *Barringtonia*, *Hibiscus tiliaceus*, *Brownlowia*, *Pongamia*, two *Dalbergias*, a *Cæsalpinia*, *Avicennia*, *Acanthus ilicifolius*, *Cerbera*, *Ægiceras*, *Ægialitis*, *Phœnix paludosa*, *Nipa* and several other shrubs and climbers. These are especially plentiful in the northern parts, where some of them extend into the swamp forests, and, with *Tamarix*, *Pandanus*, *Calamus*, *Flogellaria* and some others, form a rather dense undergrowth; elsewhere the undergrowth is very scanty. With these plants on northern river banks some mangroves, especially *Kandelia* and *Bruguiera*, are associated. As the influence of the tides increases, the mangroves become more numerous, *Ceriops* and *Rhizophora* now appearing with the others, till at length the riparian vegetation is altogether mangrove. By this time too, *sundrī* and its associates largely disappear from the swamp forests, which are now mainly composed of *geoā* (*Excœcaria Agallocha*). Nearer the sea, *geoā* in turn disappear, and the forest is almost exclusively composed of mangroves. This pure mangrove forest sometimes extends into the tides, but at other times is separated from the waves along the sea face by a line of low sand hills on which reappear some of the swamp forest species, accompanied however by a few plants characteristic of other Asiatic shores, like *Erythrina indica*, *Thespesia populnea*, *Ficus Rumphii*, and others, for which the conditions present in the swampy islands appear to be unsuited.

The wild animals of Khulnā include tiger, leopard, rhinoceros, wild buffalo, wild pig, wild cat, deer, porcupines, otters and monkeys. These animals are found for the most part in the Sundarbans to the south and are comparatively scarce in the settled tracts to the north. The rhinoceros was formerly common, and Alexander Hamilton, writing of the Sundarbans in 1727, described them as containing many of these animals. "The tongue of the rhinoceros," he adds, "is somewhat of a rarity, for if he can but get any of his antagonists down he will lick them so clean that he leaves no skin or flesh to cover their bones." Even as late as 1859 we find it stated that the country at the mouths of the Mālanchā and Raimangal rivers was infested by rhinoceros and deer, the whole ground being cut FAUNA.

up by their feet. Both rhinoceros and buffaloes have now been almost exterminated by native *shikāris*. Tigers, however, are exceptionally numerous, and as many of them are man-eaters, they are literally a scourge in the forest area. This is no new feature, for 30 years ago Sir James Westland mentioned one such brute who was an object of dread over a large tract of land. "Hardly a week passed but there were one or two reports of people carried off by him, and he used to be perfectly well known. He had apparently a charmed life. One day he came on board an Englishman's boat and coolly walked off with one or two of his oarsmen. The Englishman levelled a blunderbuss at him, but the instrument burst, and while it much injured the shooter, the tiger got off scot-free. On another occasion the same tiger passed within a few yards of a gentleman who was accustomed to and prepared for such interviews. He of course fired, but again the beast escaped scatheless. This pest was finally killed by Mr. Morrell of Morrellganj, who laid wait for him, shutting himself up in an iron cage. The tiger was only severely wounded by the shot, and he charged and knocked over the cage; but the cessation of his ravages showed that the wound had a mortal effect."

These brutes, who will swim broad streams in search of prey, are justly dreaded by those whose business takes them into the forests. No woodcutter will go there to cut wood unless accompanied by a *fakīr*, who is supposed to have power over tigers and other wild animals. Before commencing work, the *fakīr* assembles all the woodcutters of his party, clears a space at the edge of the forest, and erects a number of tent-like huts, in which he places images of various deities, to which offerings are made. When this has been done, the allotment is considered free of tigers; and each woodcutter, before commencing work, makes an offering to the jungle deities, by which act he is supposed to have gained a right to their protection. In the event of any of the party being carried off by a tiger, the *fakīr* decamps, and the woodcutters place flags at the most prominent corners of the allotment to warn off others.

The difficulty of clearing the forest of these brutes is naturally very great owing to the dense jungle, and it has sometimes happened that while the sportsman imagined that he was following up a tiger, the tiger was stalking him. No less than 101 men were killed by tigers in the Sundarbans forests in 1905-06, and 83 in 1906-07. In order, if possible, to reduce their numbers, Government pays a reward of Rs. 50 for each tiger shot east of the Passur river and Rs. 100 for each of those to the west of it.

Regarding the causes of the prevalence of man-eating tigers, Sir Henry Farrington, Deputy Conservator of Forests, formerly in charge of the Sundarbans Division, writes :—"This is probably the result of their being fired at by native *shikāris*, who, as a rule, only use small slugs which wound and irritate the tiger without killing it. The diminution in the number of deer caused by wholesale slaughter by native *shikāris* also tends to make tigers man-eaters, for it is obvious that, in forests with a normal stock of *chital*, tigers would have no difficulty whatever in getting a living and would considerately avoid mankind. Even a confirmed man-eater would be less harmful if deer were in abundance. It is also a curious fact that man-eaters are far worse in those localities most frequented by native *shikāris*." With reference to these remarks, however, it may be observed that the man-eating propensities of tigers in the Sundarbans have been notorious for over two centuries. Bernier, describing this tract in the latter half of the 17th century, writes :—"It is in many places dangerous to land, and great care must be had that the boat, which during the night is fastened to a tree, be kept at some distance from the shore, for it constantly happens that some persons or another falls a prey to tigers. These ferocious animals are very apt, it is said, to enter into the boat itself, while the people are asleep, and to carry away some victim, who, if we are to believe the boatmen of the country, generally happens to be the stoutest and fattest of the party." It may be added that in the Sundarbans a tiger is called a *siāl*, which in other parts of Bengal means a jackal.

Leopards are also numerous in the Sundarbans and in newly reclaimed land, where they take up their quarters in thickets near human habitations and carry off cattle and other animals. Lately one appeared in the outskirts of the town of Khulnā, but was scared away after it had managed to kill a three-legged cow. Wild pigs are numerous and destructive to the crops, and deer also do great damage in November and December when the rice has not reached maturity; they include spotted deer, barking deer and hog deer, but the most common is spotted deer.

Birds. The game birds of the district include wild goose, wild duck, cranes, jungle-fowl, snipe, partridge, and numerous water-fowl, which are common both in the Sundarbans and in the large *bils* situated in the interior. Among other birds may be mentioned adjutants of two kinds, one the common *Ardea gigantea*, the other the marabout adjutant, from which is obtained the beautiful feathers bearing that name, fishing and other eagles, vultures,

kites, hawks, owls, *mainās*, doves, parroquets, flycatchers, orioles, woodpeckers, sandpipers, egrets, waders, small and large spoon-bills, pelicans, storks, paddy birds, herons, etc.

Croco-diles. The rivers and estuaries are infested with crocodiles, which are exceptionally numerous in the Madhumatī and Bhairab, while in the Sundarbans they are so abundant that it is not safe to bathe except at places specially protected by palisades of bamboos or wooden stakes. Even this precaution sometimes fails. Instances have frequently been known of crocodiles entering within the palisades from the land side during the night. In the morning the first notice of the hidden danger is the struggles and shrieks of some unfortunate woman seized and dragged under water. A striking instance of their audacity is on record. Many years ago at Khulnā a gang of convicts were being inspected by the Magistrate prior to their being sent off to another and more distant jail. The men, numbering with their guards about 50, were drawn up in line on the raised embankment of the river, and the examination was proceeding, when a crocodile rushed up the bank, seized a prisoner by the legs, dragged him from the ranks, and in a moment, before any assistance could possibly be rendered, had plunged into the river and disappeared. Sharks, also, are by no means uncommon in the larger streams and estuaries.

Fish. Fish also abound in nearly all the rivers and estuaries. The most valuable fish caught in the estuaries and estuarine rivers are different kinds of mugils and *Polynemus* and the well-known *bhetki* (*Lates calcarifer*). The delicious *tapsi* (*Polynemus paradiseus*) is also found in some of the tidal rivers, such as the Passur, and the *hilsā* (*Clupea ilisha*) in the Madhumatī. The Sundarbans, in fact, form the most valuable of the estuarine fisheries in Bengal, for the numerous waterways are full of fish and crustacea, and in Khulnā this source of fish supply has barely been tapped. Fish are also numerous in the inland rivers, but the deterioriation of their channels caused by the receding of the Ganges water has seriously affected the supply. They have now become tidal, and the water is consequently brackish, so that carp have already deserted them. The *bils* are also valuable fisheries. In the rains they afford spawning ground for numerous varieties of fish, and shelter to all during the dry season. Moreover, being usually full of hardy aquatic weeds and floating plants of various kinds, they are not open to free netting and are immune from modes of capture which might exhaust the supply. The water being practically stagnant is not favourable to carp life, and the larger

varieties usually desert them in favour of rivers. But they are the proper home of *koi* or climbing perch (*Anabas scandens*), *māgur* (*Clarius magur*), *singi* (*Saccobranches fossilis*) and a host of other fish, which, though dark and unsightly, and often of small size, are highly prized by the people as affording nourishing food, especially for the convalescent. With the gradual silting up of the rivers and the increasing pressure of population, however, the *bils* are being reclaimed and brought under cultivation causing a corresponding reduction of the fishery area. Numerous fish are also found in the tanks which abound in the district for it is not possible to build a house except on the bank of a river, without first raising the land with earth and thereby excavating a tank.

The *koi* above mentioned is one of the most curious fish found in the district. It is an ugly, voracious little fish about 5 inches in length, of a mottled brown and yellow colour. Numbers of them may be seen hanging on to the mangrove stems by spines arranged along the margin of the gills, three or four feet above the level of the receding tide, from which elevation they drop into the water by scores when disturbed by a boat or a steamer passing; or they may be seen floundering about upon the black mud, where they lie in hundreds sunning their ugly little bodies.

CLIMATE. The seasons in Khulnā are substantially the same as in other parts of Lower Bengal. The winter sets in the beginning of December and lasts till the middle of February. These are cool months with a prevailing north-west wind and a heavy dew at night, but are trying to persons predisposed to rheumatism. From the middle of February to the end of March, a period locally regarded as the spring, the wind veers round from the north-west to the south, and is often variable. It is tolerably hot during the day time, and is fairly cool at night, when there is often heavy dew. The weather becomes very hot in April and continuest o be so till the middle of June, when the temperature is lowered by the setting in of the monsoon. But even during the rains the heat is often great, and if there is no rain for a week or so, it becomes extremely sultry. The rains abate in September, when the heat again becomes trying and the atmosphere steamy. October and November may be termed the autumn in this district; and the cold weather may be said to begin in November. By January it is often quite cold.

Barisal guns. The sounds known as the "Barisal guns," because they resemble the report of cannon or loud explosions, are heard in this district during the south-west monsoon and rainy season. They appear to come from the south or south-east, *i.e.*, from the sea-

board, and are usually heard distinctly after a heavy fall of rain or on the cessation of a squall, generally while the tide is rising. Mr. H. J. Rainey, a zamīndār of Khulnā, has pointed out one curious circumstance, viz., that the direction of the sounds appears to travel invariably along the course of the streams that discharge themselves into the Bay. "This circumstance," he says, "I have carefully observed for a series of years, and hence I indicated the noises as coming from the sea-board. Khulnā is situated on the confluence of the rivers Bhairab and Rūpsā (the latter a local name for the continuation of the Passur), which run respectively north and east of it; and when I was residing there, I noticed that the sounds appeared to come from the south-east, while now that I am living across the Rūpsā, on the west side of it, the noises are heard from the south-west."*

Rainfall.

The rainy season begins about the middle of June and continues till October. But in the latter part of March, during April and sometimes in May, the north-west wind brings in showers between 3 or 4 o'clock in the afternoon accompanied by lightning. The annual average rainfall for the whole district is 65·97 inches, of which 6·45 inches fall in May, 12·76 inches in June, 13·10 inches in July, 12·32 inches in August, 9·55 inches in September and 5·21 inches in October. The following table shews for the cold, hot and rainy seasons the rainfall recorded at the different rain registering stations, the figures shewn being the average in each case:—

Station.	Years recorded.	November to February.	March to May.	June to October.	Total.
KHULNA	29—30	2·68	11·27	50·96	64·91
BAGHERHAT	29—30	2·79	11·61	56·69	71·09
NAKIPUR	11—12	2·05	8·50	52·02	62·57
RAMPAL	10—11	2·64	10·35	55·27	68·26
SATKHIRA	30—31	2·22	11·05	49·77	63·04
DISTRICT AVERAGE		2·48	10·55	52·94	65·97

* Proceedings of the Asiatic Society, Bengal, 1879, pp. 243, 244, 291.

CHAPTER II.

HISTORY.

PREHISTORIC PERIOD.

In prehistoric times, Khulnā is believed to have formed part of the deltaic tract known as Banga. In the *Aitareya Aranyaka* the inhabitants of this tract are represented as eaters of indiscriminate food and progenitors of many children, while the *Raghuvansa* describes them as living in boats and growing transplanted rice for their staple crop—a description which has been said to mark them as the ancestors of the Chandāls, who form a predominant race in Khulnā. These references would lead one to suppose that the people of the lower delta were in a very low state of civilization, but later accounts show that this tract had become a populous and civilized country It appears to have formed part of the kingdom of Samatata, a name meaning the low-lying country near the sea. As early as the fourth century A.D. the conquests of Samudra Gupta extended as far as Samatata, and in the seventh century A.D. we find the Chinese traveller Hiuen Tsiang describing it as a low-lying country bordering on the great sea, rich in crops, flowers and fruits. "The climate" he said, "is soft and the habits of the people agreeable. The men are small of stature and of black complexion, but hardy by nature and diligent in the acquisition of learning. There are some 30 Buddhist monasteries with some 2,000 priests and 100 Hindu temples, while the naked ascetics called Nigranthas are also numerous.". From this account it would appear that the doctrines of Buddha had spread to the south of the Gangetic delta. The royal family seems also to have embraced Buddhism, for one of them, Silābhadra, whom Hiuen Tsiang met in Magadha, was a venerable old Buddhist scholar, while another native of Samatata, Indrābhadra, who was perhaps a spiritual descendant of Silābhadra, set up a fine life-size image of Buddha at Bodh Gayā.* Later, in the 11th century A.D., this tract formed part of Bāgri, a name given to the southern deltaic portion of the kingdom of Ballāl Sen.

* Report Arch. Surv. Ind. for 1903-04 (p. 52).

These references, fragmentary as they are, cannot be said to have special application to the tract included in the present district of Khulnā. Indeed, it has been held that in the early ages this part of the delta had not yet been formed. Thus, Bābu Nabīn Chandra Dās writes in *A Note on the Ancient Geography of Asia*:—"It is probable that the Ganges originally met the sea in the tract which now forms the district of Murshidābād or Nabadwīp (Nadiā, new isles). Lower Bengal, or the delta of the Ganges and the Brahmaputra, was then a part of the sea, which generally receded southwards in the course of time, a theory which receives corroboration from other quarters also." This corroborative evidence is set forth by the author as follows:— "We find in the *Mahābhārata, Vana Parva* (Ch. 113), that Yudhisthira came to the Kausikī *Tirtha* (junction of the Kausi or Kusi and the Ganges, opposite Colgong), and found the sea beyond, with 500 rivers flowing into it. Kālī Dāsa, in his *Raghuvansa* (Canto iv) speaks of the army of Raghu as having flowed, like the Ganges, led by Bhagīrath, to the eastern ocean and conquered the Suhmās, on the sea-shore dark with palm trees, and the Vangas, who fought with boats and erected monuments on the isles at the mouth of the Ganges. The eastern ocean meant is the Bay of Bengal, which then probably rolled her waves up to the sub-Himalayan tract east of Anga (Bhāgalpur) and west of Kāmrūpa (Assam). The present Bay can hardly be said to be east of Ajodhyā, whence the army had marched down eastwards, according to the geography of the times as known to Kālī Dāsa."

Khan Jahan. The earliest traditions of the district are connected not with any ancient Buddhist or Hindu kingdom but with a Muhammadan called Khān Jahān Alī or more generally Khānja Alī. Local legend relates that he came here over four centuries ago to reclaim and cultivate the Sundarbans, which were then waste and covered with forest. He is said to have obtained a grant of this part of the country from the King of Bengal or the Emperor of Delhi, and one account, by a common anachronism, says that he was a courtier of Akbar. The story runs that a *sannyāsī* had promised to give the Emperor a valuable present, but when he came, the Emperor was asleep and Khānja Alī was fanning him. Khānja Alī being fearful of disturbing the Emperor, the holy man refused to wait, but before he left, blessed Khānja Alī and made over the gift to him. Pleased with the conduct of his courtier, the Emperor bade him retain the present and further ordered that he should be given a grant of money and any land on which he chose to settle. Khānja Alī then left the court and

came with a large number of followers to the Sundarbans, where he reclaimed a vast tract of jungle. He is represented as marching through the district with 60,000 men making his road as he went along, and as settling finally at Bāgherhāt. Tradition assigns to him remains found in various parts of the district, especially those near Bāgherhāt; and he is credited with building 360 mosques with stone brought from Chittagong, and also with digging 360 tanks called after his leading followers—Bakhtiyār Khān, Ikhtiyār Khān, Alam Khān, Saadat Khān, Ahmad Khān, Dariā Khān, etc. In his old age he renounced worldly affairs and lived the life of an ascetic in Bāgherhāt, where his tomb may still be seen with an inscription saying that he left this world for a better one in the year 863 A.H., *i.e.*, 1459 A.D. He is now regarded as having been a great warrior and a holy saint in his lifetime, and his tomb is a place of pilgrimage.

Apart from legend, we know little of this early Muhammadan ruler. Even the name popularly given to him (Khān Jahān Alī, corrupted by the rustic tongue into Khānja Alī) is not warranted, for in the inscription on his tomb he is simply referred to by his title Khān Jahān. It appears certain, however, that he was the Governor of this part of the country in the time of Nāsīr-ud-dīn Mahmūd Shāh (1442-59); and it is possible, as pointed out by Professor Blochmann, that he may be identical with a certain Khwāja Jahān mentioned in an inscription at Dacca, which says that the entrance to a mosque was erected by "a Khān whose title is Khwāja Jahān, in the reign of Mahmūd Shāh"; the date of the inscription corresponds to 13th June 1459.* Beyond this, history remains silent, but we may accept as true the popular tradition that, besides his own mausoleum, he erected the mosque at Bāgherhāt which now goes by the name of the Sātgumbaz, and that he was one of the earliest reclaimers of the Sundarbans. The legends about him, as handed down from father to son, are however not without historical value. In these legends, writes Dr. Bloch, "Khān Jahān appears as a holy man and a staunch warrior, who was sent out by the Emperor of Delhi to conquer the distant country, and who worked great miracles and achieved wonderful deeds. Similar stories of a military conqueror being turned into a Pīr, or of a saint, like the famous Shāh Jalāl of Sylhet, waging war against the infidels, however fabulous in detail, still retain a distant echo of the important political role that was played in

* H. Blochmann, *Notes on Arabic and Persian inscriptions*, J.A.S.B., Part I, 1872 (pp. 107-108).

the earlier centuries of Muhammadan rule in India by saints and leaders of the great spiritual orders." *

KHALIFATABAD. The tract of country round Bāgherhāt, over which Khān Jahān ruled, was known as Khalīfatābād, *i.e.*, the clearance of the Viceroy (*Khalīfa*), and bore this name up till the end of the 18th century. Here, among the creeks and jungles, the Bengal king Nasrat Shāh (1519-32) erected a mint, apparently in opposition to his father Alā-ud-dīn Husain Shāh, for coins struck at Khalīfatābād in 1515 during the life-time of the latter are still in existence. "It is, however, curious," Professor Blochmann writes, "that a little higher up on the Bhairab, east of Khulnā, where the Athárabānkā (the eighteen windings) joins the Bhairab, there is an Alāipur, *i.e.*, Alā-ud-dīn's town. Were it not for the distinct statement of the *Riyāzu-s-Salātin* that Alā-ud-dīn, after arriving as an adventurer in Bengal, settled at Chāndpur (a very common name) in Rādhā district, *i.e.*, west of the Hughli, I would be inclined to identify the Chāndpur near this Alāipur as the place where the Husain dynasty of Bengal kings had its home, especially because Husain first obtained power in the adjacent district of Farīdpur (Fathābād), where his earliest coins are struck."† Another circumstance which appears to support the theory of Professor Blochmann about the *locale* of Husain Shāh's adopted home is that the names of Husain Shāh, his brother Yusuf Shāh and his sons Nasrat Shāh and Mahmūd Shāh are found in connection with several *parganas* of Khulnā, Jessore and Farīdpur, such as Nasratshāhi, Mahmūdshāhi, Yusufshāhi and Muhammadābād.‡

Subsequently the name Khalīfatābād was given to a *sarkār* or district of the Mughal empire comprising nearly the whole of the north of the present district. Mān Singh is said to have given *jāgīrs* in this *sarkār* to the Afghāns of Orissa after he had crushed their rebellion in 1590§; and we find it described in the *Ain-i-Akbarī* as abounding in elephants and long pepper. Among the *mahāls* included in it the *Ain-i-Akbarī* mentions *mahāl* Tālā, with its chief town at Tālā on the Kabadak and Kapilmuni near it, and then *mahāls* Sāhos, Khālispur, Charuliā, Rāngdiā and Salimābād (or Sulaimānābād) north of the modern Morrellganj. North-west of

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* Archæological Survey of India, Annual Report, 1903-04.

† H. Blochmann, *Geography and History of Bengal*, J.A.S.B., vol. 42, Part I, 1873 (pp. 227-28).

‡ Abdus Salam, *Translation of the Riyāzu-s-Salātin* (Calcutta, 1904), footnote to pp. 128-29.

§ C. Stewart, *History of Bengal*, 1847.

the latter was Haveli Khalīfatābād corresponding with the modern Bāgherhāt. The north-eastern corner of the district was included in *sarkār* Sātgaon, and here the names of two *mahāls* are preserved in the modern thānas of Kalāroā and Māgurā. Khalīfatābād is one of the five towns in the Sundarbans entered in Van den Broucke's map of 1660, where it appears under the name of Cuipitavaz; the termination *avaz* is clearly the same as *abad*, and Cuipit is a corruption of Khalipat, *i.e.*, Khalifat, the letter *p* often being substituted in Bengali for *f*, *e.g.*, Firozpur becomes Pirojpur.*

Towards the end of the 16th century the tract now included in the district appears to have been ruled over by Pratāpāditya, the Hindu hero of the Sundarbans, whose adventures have been commemorated in several works, *e.g.*, the *Vidyā Sundar* by Bhārat Chandra, the *Rājā Pratāpāditya Charita* by Rām Rām Basu, and an abstract of the last work by Harischandra Tarkālankār. Perhaps the most comprehensive work, however, is *Pratāpāditya* by Bābu Nikhil Nāth Rai, B.L., a Bengali work published at Calcutta in 1906. A Bengali play of the same name has also been written recently by Pandit Kshirod Prasād Vidyābenode, M.A. **PRATAPADITYA.**

The story of the life of Pratāpāditya, as handed down by tradition, is that during the rule of Sulaimān Kararānī, king of Bengal from 1563 to 1572, one Rām Chandra, a Kāyasth of Eastern Bengal, came to Gaur, with his three sons, Bhabānand, Gunānand, and Sivānand, and there obtained an appointment in the Revenue Department of the State. Sivānand, his youngest son, was eventually raised to the position of chief *kānungo*, while Sivānand's nephews, Srīhari (or Srīdhar) the son of Bhabānand and Jānakiballabh, the son of Gunānand, became great favourites of Dāūd Khān, who succeeded his father, Sulaimān Kararānī, as king of Bengal. By him Srīhari was given the title of Rājā Bikramāditya and made chief minister, while Jānakiballabh was made his chief revenue officer under the name of Basant Rai. **Legendary account.**

Subsequently, when Dāūd Khān rebelled against the Emperor Akbar and an imperial army was marching on Gaur, Dāūd Khān fled from his kingdom after entrusting all his wealth to Bikramāditya and Basant Rai, with orders to remove it to some place of safety. The two cousins then took all they could lay their hands on to a house they had recently built on the banks of the Jamunā in the Sundarbans. So great, it is said, was the treasure thus removed that the splendour of the city of Gaur was transferred to this new settlement, which was therefore given the name of Yasohara (now corrupted to Jessore) meaning "depriving of

* H. Blochmann, *Geography and History of Bengal*, J.A.S.B., Part I, vol. XLII, 1873, p. 231.

glory." Another explanation which has been suggested is that the name means that other glorious cities compared with this city had no glory and that Yasohara is equivalent to "supremely glorious." The site of the city they founded is at Iswarīpur in this district.

Not only had Bikramāditya and Basant Rai taken away with them the king's treasure, but also all the State papers. Accordingly, after the capture of Gaur in 1574, Rājā Todar Mal demanded their restitution; and they were given up by the cousins on condition that they were allowed to retain the territory in which they had settled, claiming that it had been granted to them by Dāūd Khān. For a long time thereafter Rājā Bikramāditya and Rājā Basant Rai ruled jointly over Yasohara.

Now Bikramāditya had a son, named Pratāpāditya (often abbreviated to Pratāp), of whom it was predicted that he would supplant his father. Even in his early youth Pratāpāditya was distinguished for his ability and prowess, and the old Rājā began to fear the fulfilment of the prediction and to suspect that the young prince would not only supplant him but also kill Basant Rai, whom the old Rājā loved more than his own son. Filled with these suspicions Bikramāditya persuaded Basanta Rai, much against his will, to agree to send him to Agra. Pratāpāditya obeyed their orders, but, in his turn suspected that his uncle had contrived to remove him from Jessore merely in order to increase his own power there in the present and to secure the principality for his own children in the future. At Agra Pratāpāditya won the favour of the Emperor by his princely appearance, winning manners and ready wit, and in a short time was granted a *sanad* making him a Rājā and conferring on him his father's territory. He then returned to Yasohara and, having supplanted his father, removed the seat of government to Dhūmghāt.

For a time Pratāpaditya prospered exceedingly. He adorned his kingdom with noble buildings, made roads, built temples, dug tanks and wells, and, in fact, did everything that a sovereign could do for the welfare of his subjects. The limits of his kingdom quickly extended, for he made war on his neighbours and came off victorious in every battle till all the surrounding country acknowledged his rule. Ultimately he declared himself independent of the Emperor of Delhi, and so great was his power that he managed to defeat one after another 22 generals sent against him. All these successes he owed to the favour of the goddess Jasoreswarī (Kālī), who, pleased with his zealous devotion to herself and his charity to all around him, had promised that she would aid him in every difficulty, and

never leave him till he himself drove her from his presence. Her favour was at last withdrawn, for Pratāpāditya assumed an overweening pride and became very tyrannical towards his subjects, beheading them for the least offence. The goddess, anxious to revoke her blessing, one day assumed the disguise to the Rājā's daughter, and appeared before him in Court, when he was dispensing his so-called justice by ordering a sweeper woman's breast to be cut off for having presumed to sweep the palace court in his presence. Shocked at the impropriety of his daughter, as he supposed her to be, appearing before him in Court, the Rājā ordered her out and told her to leave his palace for ever. The goddess then revealed herself and told him that her former blessing and promised aid were now withdrawn, as he himself had driven her from his presence.

The downfall of Pratāpāditaya soon followed. One of the last and worst acts of his reign was committed when he assassinated his uncle, Basant Rai, with all his children, except an infant who was hid in a field of *kachu* or arum plants. The infant, Rāghab Rai, who, when he attained manhood, was given the name of Kachu Rai to commemorate the way in which he escaped, was taken by one Bhabānand, a *Dīwān* of Bikramāditya, to the imperial court. There he obtained the ear of the Emperor, who hearing how his father and brothers had been assassinated, directed Mān Singh, the Governor of Bengal (1589-1604), to crush Pratāpāditya. Mān Singh at last succeeded in defeating him, both because the goddess Jasoreswarī had turned her back on him, and also because a treacherous courtier, Bhabānand Mazumdār, let the imperial army by a secret route through the Sundarbans. Mān Singh thus surprised the capital and captured Pratāpāditya, who was sent a prisoner to Delhi. But on the way, at Benares, he put an end to his life by swallowing some poison he kept concealed in a ring, rather than be paraded in an iron cage through the streets of Delhi. Bhabānand, from whom the Rājās of Krishnagar are said to be descended, obtained a *jāgīr* as a reward for the services he had rendered.

The traditional account of the rise and fall of Pratāpāditya is confirmed from other sources. In the *Tabakāt-i-Akbarī* we find a mention of Sridhar Bengali, who is described as being a great favourite of Dāūd Khān and as having received from him the title of Rājā Bikramajīt, *i.e.*, Bikramāditya. He and Katlu Khān, who had been Governor of Orissa, conspired against Lodi Khān, the *Amīr-ul-Umarā* or commander-in-chief of Dāūd Khān, and had him imprisoned and put to death, for they thought that, if he were removed, the offices of Vakīl and Wazīr

Historical references.

would fall to them. We also find it stated that when Dāūd Khān fled from Patna after his defeat by the Emperor Akbar in 1574, Bikramāditya placed his valuables and treasure in a boat and followed him.* Pratāpāditya has been identified as the king of Chandecan, which was visited in 1598 by Frances Fernandez and his companion Dominic De Josa, the first Jesuits to visit Bengal. Fernandez describes Chandecan as lying half way between Porto Grande (Chittagong) and Porto Piccolo (probably Bandel), and says that the king's dominions were so extensive that it would take 15 or 20 days to traverse them. His description points to the Sundarbans, for he says that the country had a great trade in bees'-wax, which was produced in the jungles, that the country was infested by dacoits, and that he and his companion encountered great dangers both from them and from tigers on the way to Chandecan.† Again, the family records of the Rājās of Chānchrā or Jessore state that the founder of the family, Bhabeswar Rai, was given a grant of *parganas* Saiyadpur, Amidpur, Mundāgāchā and Mallikpur as a reward for his services against Pratāpāditya. This grant was made by one of Akbar's generals, Azam Khān, or as he was called after he had been appointed Viceroy of Bengal in 1582, Khān Azam. It would appear, therefore, that though Pratāpāditya gained victories over the imperial armies and succeeded in eluding their attempts to capture him, he lost part of his territory before he was finally reduced. It is probable, moreover, that his victories were gained over small expeditions, for the Mughal armies were busy in endeavouring to quell the more serious risings of the Afghāns.

Jesuit accounts.

The identification of Chandecan mentioned above with the capital of Pratāpāditya is due to the researches of Mr. H. Beveridge, who writes as follows in an article *Were the Sundarbans inhabited in ancient times?* published in the Journal of the Asiatic Society of Bengal, Vol. XLV, Part I, 1876. "By far the most interesting account of the Sundarbans is contained in the letters of the Jesuit priests who visited Baklā‡ and Jessore in 1599 and 1600. Their letters were published by Nicholas Pimenta and have been translated into Latin and French. I was indebted for my introduction to them to my friend Dr. Wise, who told me that they were quoted in Purchas' *Pilgrimage*. Extracts from the letters and the subsequent history of the mission are also

* Sir H. Elliot, *History of India* (1873) vol. V, pp. 373, 378.

† H. Beveridge, *History of Bākarganj*, (p. 446) Appendix C VIII., *Francis Fernandez*.

‡ Baklā was a *Sarkār* comprising portions of the present Backergunge and Dacca districts.

given by Pierre du Jarric in his *Histoire des choses plus memorables advenues aux Indes Orientales*, Bordeaux, 1608-14.

"It appears that Pimenta, who was a Jesuit visitor and stationed at Goa, sent two priests, Fernandez and Josa, to Bengal in 1598. They left Cochin on 3rd May, 1598, and arrived in 18 days at the Little Port (Porto Pequino). From thence they went up the river to Gullo or Goli,* where they arrived eight days after leaving the "Little Port." While at Gullo, they were invited by the Rājā of a place called Chandecan (in Italian Ciandecan) to pay him a visit, and accordingly Fernandez sent Josa there, and he was favourably received by the king. One year after these two priests had left Cochin, Pimenta sent two other priests, viz., Melchin de Fonseca and Andrew Bowes, to Bengal, and they arrived at Chittagong or at Dianga† some time in 1599. On 22nd December, 1599, Fernandez wrote from Srīpur, giving an account to Pimenta of the success of the mission, and on 20th January, 1600, Fonseca wrote from Chandecan giving an account of a journey which he had made from Dianga to Chandecan by way of Baklā. Fonseca's letter is most interesting. He described how he came to Bacola, and how well the king received him, and how he gave him letters patent, authorising him to establish churches, etc., throughout his dominions. He says that the king of Baklā was not above eight years of age, but that he had a discretion surpassing his years. The king "after compliments" asked me where I was bound for, and I replied that I was going to the king of Ciandecan, who is to be the father-in-law of your Highness. These last words seem to be very important, for the king of Ciandecan was, as I shall afterwards show, no other than the famous Pratāpāditya of Jessore, and therefore this boy-king of Baklā must have been Rām Chandra Rai, who we know married Pratāpāditya's daughter."

Fonseca then proceeds to describe the route from Baklā to Chandecan, regarding which Mr. Beveridge writes—"Though the good father evidently had an eye for natural scenery and was delighted with the woods and rivers, it is evident that what he admired so much must have appeared to many to be "horrid jungle," and was very like what the Sundarbans now are. In fact, a great part of this description of the route from Baklā to Ciandecan is still applicable to the journey from Barīsāl to Kālīganj, near which Pratāpāditya's capital was situated. The chief difference is that the progress of civilization has driven away the herds

* Gullo is identified by Mr. Beveridge with Bandel.

† Dianga has been identified by Professor Blochmann with Dakhindanga on the Sangu river south of Chittagong.

of deer and monkeys from the ordinary routes, though they are still to be found in the woods and the deer have given their name to one of the largest of the Sundarban rivers (the Haringhātā). The faithfulness of Fonseca's description seems indicated by his modestly admitting that he had never seen a rhinoceros, while stating (quite truly) that there were such animals in the forest. Had he come upon any town on his route, it is reasonable to suppose that he would have mentioned it.

"Fonseca arrived at Ciandecan on the 20th November, and there he found Fernandez's companion Dominic de Josa, who must either have been left there by Fernandez in 1598, or had returned some time afterwards. The king received Fonseca with great kindness, so much so, that he says he does not think a Christian prince could have behaved better. A church was built at Ciandecan, and this was the first ever erected in Bengal, and was as such dedicated to Jesus Christ. Chittagong was the second, and then came the church at Bandel, which was erected by a Portuguese named Villalobos. The fair prospects of the mission as described by Fernandez and Fonseca were soon overclouded. Fernandez died in November 1602 in prison at Chittagong, after he had been shamefully ill-used and deprived of the sight of an eye; the king of Ciandecan proved a traitor, and killed Carvalho the Portuguese commander, and drove out the Jesuit priests.

"Leaving these matters, however, for the present, let us first answer the question, where was Ciandecan? I reply that it is identical with Pratāpāditya's capital of Dhūmghāt, and that it was situated near the modern Kālīganj. My reasons for this view are first that Chandecan or Ciandecan is evidently the same as Chānd Khān, and we know from the History of Rājā Pratāpāditya by Rām Rām Basu (modernized by Harish Tarkālankār) that this was the old name of the property in the Sundarbans, which Pratāpāditya's father Vikramāditya got from king Dāūd. Chānd Khān, we are told, had died without heirs, and so Bikramāditya got the property. And there is nothing in this contradictory to the fact that Jessore formerly belonged to Khānja Alī (Khān Jahān); for Khānja Alī died in 1459, or about 120 years before Vikramāditya came to Jessore, so that the latter must have succeeded to some descendant of Khānja Alī, and he may very well have borne the name of Chānd Khān. When the Jesuit priests visited Ciandecan, Pratāpāditya cannot have been very long on the throne, and therefore the old name of the locality (Chānd Khān) may still have clung to it. But besides this, Du Jarric tells us that after Fernandez had been killed at

Chittagong in 1602, the Jesuit priests went to Sondīp, but they soon left it and went with Carvalho the Portuguese commander to Ciandecan. The king of Ciandecan promised to befriend them, but in fact he was determined to kill Carvalho, and thereby make friends with the king of Arakan, who was then very powerful and had already taken possession of the kingdom of Baklā. The king therefore sent for Carvalho to "Jasor," and there had him murdered. The news reached Ciandecan, says Du Jarric, at midnight, and this perhaps may give us some idea of the distance of the two places.

"I do not think that I need add any thing to these remarks except that I had omitted to mention that Fernandez visited Ciandecan in October, 1599, and got letters patent from the king. As an additional precaution, Fernandez obtained permission from the king to have these letters also signed by the king's son, who was then a boy of 12 years of age. The boy may have been Udayāditya, and so he must have been only 3 or 4 years older than Rām Chandra Rai of Baklā."

The visit of Jesuits to the capital of Pratāpāditya was also mentioned by Purchas, who wrote—"The king of Chandican (which lyeth at the mouth of the Ganges) caused a Jesuit to rehearse the Decalogue . . . This king and the others of Bacola and Aracan have admitted the Jesuit into their countries."

THE BARAH BHUIYAS.

According to tradition, Pratāpāditya was one of the Bārah Bhuiyās (or Bhuyās), the twelve chiefs who held the south and east of Bengal towards the close of the 16th century. Local patriotism, indeed, claims that Pratāpāditya overcame all the other Bhuiyās and had undisputed pre-eminence, but precedence should probably be given to Isā Khān Masnad-i-Alī of Khizrpur. The latter is described by Abul Fazl as the Marzban-i-Bhāti or governor of the low-lying land near the sea and as the ruler over twelve great zamīndārs, while Ralph Fitch who visited Sunargaon in 1586 says that "the chief king of all these countries is called Isacan, and he is the chief of all the other kings." Apart from this question, there seems no doubt that Pratāpāditya was one of the most powerful of the Bārah Bhuiyās, who, from occasional references in the works of Muhammadan historians supplemented by tradition, appear to have been nominally vassals of the Emperor but practically independent.

The researches of Dr. Wise have thrown further light on these rulers and have shewn that their power was well attested by early European travellers and missionaries. Jarric, who derived his information from the Jesuit fathers sent to Bengal in 1599, says that the "prefects" of the twelve kingdoms governed by the

king of the Pathāns united their forces and drove out the Mughals. They obeyed no one, paid no tribute, and though they displayed a royal splendour, they did not call themselves kings but *Boiones*, which is obviously a Latin translation of Bhuiyās. He then goes on to say that three of these chiefs observed the religion of the country, viz. *Chandecanius*, *Siripuranus*, *et Bakalanus*, and the remaining nine were Muhammadans. The three Hindu chiefs are clearly the Bhuiyās of Chandecan, Srīpur and Baklā. D'Avity, whose work was published at Paris in 1643, copies this description of Bengal, but gives a few additional particulars of these twelve sovereigns, as he calls them. The most powerful, he informs us, were those of Srīpur and Chandecan, but the greatest of all was Masondolin or Maasudalin, *i.e.*, Masnad-i-Alī, the title of Isā Khān of Khizrpur. Again, Sebastien Manrique, a Spanish monk of the order of Saint Augustin, who resided in India from 1628 to 1641, states in his Itinerary that the kingdoms of Bengal were divided into 12 provinces, among which he mentions Chandecan, and that the king of Bengal, who resided at Gaur, maintained as vassals 12 chiefs in as many districts, whom the natives call the *Boines de Bengala*.

"These authorities," says Dr. Wise, "advance our knowledge considerably. The Bhuyās, according to them, had been dependents of the king of Gaur, but had acquired independence by force of arms. They refused to pay tribute or to acknowledge allegiance to any one. From being prefects appointed by the king they had become kings, with armies and fleets at their command, ever ready to wage war against each other or to oppose the invasions of Portuguese pirates or Magh freebooters." The attainment of such independence can readily be understood when it is remembered that till the close of the 16th century Akbar's empire had not been permanently established in Bengal owing to a dangerous military revolt and the persistent rebellions of the Afghāns. While the Emperor's armies were dealing with the latter, the Bhuiyās of Bengal were able to maintain practical independence amidst the swamps and rivers of the delta, which were a strong natural obstacle to invasion.*

MUGHAL RULE.

After the fall of Pratāpāditya the portion of his territory lying within the Khulnā district passed into the hands of the Rājās of Jessore, otherwise known as the Chānchrā Rājās. These Rājās trace their descent to Bhabeswar Rai, whom Khān Azim, Governor of Bengal from 1582-84, rewarded for his services

* Dr. James Wise, *The Bārah Bhuyās of Bengal,* J.A.S.B. Vol. XLIII, Part I, 1874, and Vol. XLIV, Part I, 1875.

against Pratāpāditya by a grant of land comprising *parganas* Saiyadpur, Amidpur, Mundāgāchā and Mallikpur. On his death the property passed to his son Mahtāb Rām Rai (1588-1619), who assisted Mān Singh against Pratāpāditya, and it was greatly extended by Manohar Rai (1640-1705), who during his long life acquired one *pargana* after another. Finally, only a few *parganas* remained unabsorbed in the estate of the Rājās of Jessore, who pursued a steady policy of aggrandizement, until in the last days of Mughal rule the greater part of the district was parcelled out between them and a few other zamīndārs.

These great landholders were a turbulent and independent class, ready at any suitable opportunity to withhold payment of the revenue. Accordingly, the Nawābs kept a military governor with a small force in each of the districts, and this officer, who was called the *Faujdār*, exercised on the part of the Nawāb sufficient power to make it to the interest of each zamīndār to pay the demand. The *dārogā*, as he was called, appears to have been almost the only Government officer in the district who had anything to do with civil administration. It was his duty to receive from the zamīndārs the dacoits, robbers and murderers whom they had to apprehend, and to try them. He might also receive complaints direct from the complainants, but his judicial authority was limited, for, except in petty cases, he had to submit his proceedings to the Naib Nawāb for orders. Neither in theory nor in practice had he any authority to supervise the proceedings of the zamīndārs, with whom lay practically the whole administration of the country. They paid a certain sum by way of excise revenue, and managed excise within the limits of their estates exactly as they pleased. They handed over to Government a certain sum as duties on internal trade, and were allowed in turn to make almost any exactions they pleased on traders. The duties of police were in their hands, and they or their subordinates had also a good deal to do with the adjudicature of petty disputes whether criminal or civil.

The general result of this system has been well described by Sir James Westland. "Almost all the functions of administration were heaped upon the zamīndārs, and they might do as they pleased so long as they discharged their revenue. Supervision was a mere name, and the consequences may be easily imagined. The zamīndārs followed the example of Government and transferred the task of administration to subordinates selected by themselves, not with reference to their ability or uprightness, but solely with reference to their readiness to secure their masters' interests. The people were oppressed that the zamīndār might

have his rent, and they were plundered in order that the zamīndār's servants might become rich. The zamīndārs, who performed all their police duties on contract, kept up the most wretchedly inefficient establishments for the purpose; and dacoits and robbers plied their profession with vigour, finding little hindrance from the police, and often in league with them, and even with the zamīndār himself or his higher officers. Complaint against wrong was useless; the zamīndār or his officer had it entirely in his own option whether he would listen to it or not: and the complainant had very little chance of relief, for the oppressor was often the zamīndār's servant, and the plunderer, even if they took the trouble to trace him, would not find it difficult to make friends with his captors."*

MAGH RAIDS. In common with other sea-board districts Khulnā appears to have suffered during the Mughal rule from the depredations of Arakanese (Magh) and Portuguese (Firinghī) pirates, whose galleys swept the sea-face of the Sundarbans and ravaged the villages along the estuaries. To such an extent were these depredations carried on that in Rennell's map a note is entered that the portion of the Sundarbans lying in Backergunge had been depopulated by the "Muggs." A vivid account of the ravages of the Portuguese corsairs has been left by Bernier, who writes :—"The King of Rakan, who lived in perpetual dread of the Mogol, kept these foreigners, as a species of advanced guard, for the protection of his frontier, permitting them to occupy a seaport called Chatigon, and making them grants of land. As they were unawed and unrestrained by the government, it was not surprising that these renegades pursued no other trade than that of rapine and piracy. They scoured the neighbouring seas in light galleys, called galleasses, entered the numerous arms and branches of the Ganges, ravaged the islands of Lower Bengale, and, often penetrating forty or fifty leagues up the country, surprised and carried away the entire population of villages on market days, and at times when the inhabitants were assembled for the celebration of a marriage or some other festival. The marauders made slaves of their unhappy captives, and burnt whatever could not be removed. It is owing to these repeated depredations that we see so many fine islands at the mouth of the Ganges, formerly thickly peopled, now entirely deserted by human beings, and become the desolate lairs of tigers and other wild beasts." Elsewhere he writes :—"Several of the islands, nearest to the sea, are now abandoned by the inhabitants, who

* J. Westland, *Report on the District of Jessore*, 1874.

were exposed to the attacks and ravages of the Arracan pirates. At present they are a dreary waste, wherein no living creature is seen except antelopes, hogs and wild fowls, that attract tigers, which sometimes swim from one island to another."

Khulnā cannot have escaped, for a Muhammadan historian, Shihāb-ud-dīn Tālish, mentions Jessore and Hooghly as places they plundered, and their route would have been through this district. Writing in the latter half of the 17th century, he describes their piratical raids as follows. "From the reign of the Emperor Akbar, when Bengal was annexed to the Mughal empire, to the time of the conquest of Chātgāon during the viceroyalty of Shaista Khān, Arakan pirates, both Magh and Firinghī, used constantly to come by the water-route and plunder Bengal. They carried off the Hindus and Muslims, male and female, great and small, few and many, that they could seize, pierced the palms of their hands, passed thin canes through the holes, and threw them one above another under the deck of their ships. In the same manner as grain is flung to fowl, every morn and evening, they threw down from above uncooked rice to the captives as food. On their return to their homes, they employed the few hard-lived captives that survived, with great disgrace and insult, in tillage and other hard tasks, according to their power. Others were sold to the Dutch, English and French merchants at the ports of the Deccan. Sometimes they brought the captives for sale at a high price to Tamluk and the port of Baleswar, which is a part of the imperial dominions and a dependency of the province of Orissa. Only the Firinghī pirates sold their prisoners. But the Maghs employed all their captives in agriculture and other kinds of service. Muslims underwent such oppression in this region of war (*dār-ul-harb*) as they had not to suffer in Europe."*

EARLY BRITISH ADMINISTRATION.†

The *dīwāni*, *i.e.*, the revenue or fiscal administration of Bengal was transferred to the East India Company in 1765, but it was not until 1781, when a court was opened at Murli near the town of Jessore, that British administration was fully established in the district. The jurisdiction of the *Adālat*, as this court was called, extended over the present districts of Khulnā, Jessore and Farīdpur, and the first Judge and Magistrate was Mr. Tilman Henckell, whose administration made a permanent mark upon the district. "His acquaintance," writes Sir James Westland, "with every subject affecting his

* Jadunāth Sarkār, *The Feringi Pirates of Chātgāon*, J.A.S.B., June, 1907.

† This account of early British administration has been compiled from Sir James Westland's Report on the District of Jessore.

district was most intimate ; and no wrong was too remote for his energy to grapple with, no advantage too distant for him to strive after. The idea of his administration was that it was the duty of Government to procure the peace and comfort of the mass of the inhabitants, though it might involve some harm in respect of the Company's commercial interests. These views were a little too advanced for his age, for there was then too great an inclination on the part of Government officials to look upon the natives as born only to be a means of profit to the Company. Mr. Henckell was never unmindful of his employers' mercantile interests, but he always set this before him as his duty—to guard the then almost helpless natives from the oppressions to which they were subjected by the commercial officers of the Company as well as by their own zamīndārs."

Sundarbans reclamation.

Soon after his appointment Mr. Henckell turned his attention to the Sundarbans and there inaugurated a system of reclamation, which after many vicissitudes has converted large tracts of forest into immense rice fields. Two objects were aimed at—to gain a revenue from lands then utterly unproductive, and to obtain a reserve of rice against seasons of famine, the crops in the Sundarbans being practically immune from drought. To ensure these objects, Mr. Henckell submitted in 1784 a proposal that grants of jungle land in the Sundarbans should be settled on favourable terms with people undertaking to cultivate them, his aim being to introduce a body of independent peasant proprietors holding directly under Government. Another part of his scheme was the establishment of a convict colony, by giving small grants of land to convicts with the exception of the most heinous offenders, who were to be shipped off to sea. Mr. Henckell went so far as to apply to the surrounding districts for drafts of long term prisoners who might form the nucleus of the colony, but nothing further appears to have been done, and this part of the scheme was never carried out.

The scheme having been approved by the Board, Mr. Henckell, after roughly defining the boundaries of the Sundarbans forest, granted about 150 leases during 1785. At the same time he established three Government outposts in central positions, and placed a *gomāshta* with a small establishment in charge of each, for the purpose of defining the boundaries of the Sundarbans, encouraging reclamation, preserving the peace, and assisting passengers. They were Henckellganj (named after him, and subsequently corrupted to Hingalganj) at the junction of the Jamunâ with the Kālindī, in the west of his jurisdiction; Chāndkhāli on the river Kabadak, in the middle; and Kachuā, at

the junction of the Baleswar and Bhairab rivers, in the east. The surrounding lands were cultivated, and the stations were at length firmly established, though at considerable expense.*

In spite of all Mr. Henckell's efforts, however, the scheme was not a success, for it was opposed by all the neighbouring zamīndārs, who claimed the lands cleared by the grantees, and indeed all the forest as far as the sea, but declined to give him any information about their estates that might enable him to decide the disputes. During 1786 he marked off by bamboo stakes the line which he took to be the northern limit of the Sundarbans and the southern boundary of the zamīndāri lands; and this strengthened the position of the lessees, but in the end the zamīndārs proved too strong for the new settlers. In 1792 they had all disappeared except sixteen, and in their case the character of the scheme had been modified, for the lessees developed into *tālukdārs*, their lands being called Henckell's *tāluks*.†

Sub-divisional adminis-tration.

In connection with this scheme Mr. Henckell set up what was to practical purposes a subdivision, a Court, called by him a "cutcherry of reference," being established at Chāndkhāli under one of his assistants, Mr. Foster. This Court was intended for the trial of claims made by the zamīndārs; and Mr. Foster was also directed to give passports and collect the Government dues on wax and honey taken from the Sundarbans, and to take cognizance of civil and criminal matters arising within a radius of 30 miles from Chāndkhāli, except when they were of importance, when he was to refer them to Mr. Henckell. He was thus given a regular subdivisional jurisdiction. Mr. Foster soon came into conflict with the zamīndārs, who had set up toll stations upon the rivers to collect money from trading boats, not even those protected by Custom House passes being allowed to go free. There were eighteen of these stations within a circuit of 14 miles from Chāndkhāli, so it may be imagined what a hindrance to trade they were. The Board, when they were informed of this system, passed stringent orders that in all cases in which such tolls were levied, Mr. Henckell was to insist on immediate restitution and to inflict corporal punishment on the offender on the spot where the exaction was made. The zamīndārs were included in this order of punishment, but if they were minors, females or incapable persons, their manager was to bear the punishment for them.

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* F. E. Pargiter, *Revenue History of the Sundarbans from 1765 to 1870*, Calcutta, 1885. Sir James Westland gives the date of the establishment of these three places as 1782-83.

† F. E. Pargiter, *Revenue History of the Sundarbans from 1765 to 1870*, Calcutta, 1885.

Police administration.

Mr. Henckell showed similar vigour in the administration of the police. In the early days of British rule the *Faujdārs*, who had been practically military commanders, were reduced to the position of superior officers of police, with *thānādārs* in charge of smaller areas under them. There were altogether four thānas in the district as then constituted, one being at Khulnā, or as it was called at that time Naābād (meaning the new clearance), and subordinate to these thānas were several outposts or *chaukīs*. The thāna officers were paid, but the *chaukīs* were worked by means of *goindās* or informers, who received no salary and obtained their livelihood by seizing innocent persons and extorting money from them.

This system did not work well. The *Faujdārs* oppressed the people, their subordinates were in collusion with criminals, and when Mr. Henckell joined the district, there were bands of robbers 50 strong roaming about it. On his appointment, the *Faujdārs* were abolished and their functions transferred to Mr. Henckell, who proposed to station at each of the four thānas a *girdwār* or head police officer, whose business it would be to apprehend dacoits and forward them for trial to Murli. Their subordinates were not to be informers, but imported sepoys, as local *barkandāzes* were apt to collude with offenders. His police were to possess more of a military than of a detective character, for the object in view was not the prosecution of minor offences, but the checking of great ones, such as dacoity and murder. When a dacoity occurred, the investigation consisted chiefly in following up the dacoits to their homes; and as they relied rather upon their strength than upon the secrecy of their proceedings, this was simply a *quasi*-military expedition. When the pursuing detachment reached the lair of the gang, the zamīndār through his servants was expected, and usually compelled by pressure, to deliver up the men.

This system of police, which cost perhaps Rs. 800 or 850 a month, proved too expensive for the commercial ideas of the Government, which in 1782 ordered the entire abolition of the police establishment, except the force at Murli. The duties of the police were imposed on the zamīndārs, who were directed to take effectual measures that no robberies, burglaries or murders were committed within their districts. They were to do their utmost to bring all offenders to justice; they were to erect thānas wherever the Magistrate should direct, to appoint officers for them, and to be answerable for their good conduct. Persons suffering from robbery were to be reimbursed for their losses by the zamīndār of the lands where the robbers lived, or of the lands

within which the robbery was committed; and if any zamīndār committed or connived at murder, or robbery, or other breach of the peace, he was to be punished with death. This system, by which the zamīndārs bore the burden of the police establishment, continued in force from 1782 until 1791 or 1792, when Lord Cornwallis reformed the administration.

Special arrangements were made for the boat routes through the Sundarbans, which lay not through cultivated lands and settled villages, but through forest and uninhabited jungle, and were infested by robbers and dacoits. Their depredations at length attracted the attention of the Government, and in 1788 six guard boats were posted along the routes to patrol the rivers and escort vessels.

Revenue administration. The system of revenue administration will be discussed in Chapter XI, and it will suffice to mention that a Collectorate was established at Jessore in 1786. Hitherto the revenue headquarters of all but the east of the district had been at Calcutta, but Mr. Henckell, pointing out the inconvenience of this arrangement, offered himself to undertake the duties of Collector without additional salary, "actuated," as he said, "by motives of public good, and the enhancement of his own credit and reputation." The Government readily accepted his offer and created a Collectorship for Jessore; it was to comprise Isafpur and Saiyadpur (which had apparently been under the Collector of Rājshāhi and Bhushnā), the estates lying between the Ichhāmatī and the present Backergunge district (then part of Dacca), which had previously been paying revenue at Calcutta and at Hooghly, and also some estates detached from Murshidābād. To enforce the payment of revenue, the Collector appears principally to have used strong pressure. Continual demands were made upon defaulters, and these had some weight, since the Collector had power to use harsher means. He had a defaulters' jail, in which recusants might be confined, and he might also attach and realize directly the rents of any estate.

Salt Department. Mr. Henckell thus united in his own person the offices of District Judge, District Magistrate and Collector, but he had no concern with the Salt Department, the jurisdiction of which extended over the south of the district. That Department was under a Mr. Ewart, who had two or three assistants, a large staff of subordinates, and a small military force, all stationed at Khulnā, which was the headquarters of the Raimangal Agency. The salt officials had established themselves in the district before any civil court had been constituted in it, and when a Judge arrived without instructions as to his relations with the salt

authorities, frequent collisions took place. The plan followed in the salt manufacture was that the Government Salt Agent contracted with certain middlemen called *malangīs* for the engagement of people as salt boilers or *māhindārs*. The *malangīs* received large advances from the salt agents, and in their turn made advances to the *māhindārs*, who engaged to proceed to specified places far south in the Sundarbans, where they gave their personal labour in the manufacture of salt. But in most cases the *māhindārs* had to be impressed and compelled by force to take the advances; and the *malangīs* were vested with certain powers to enable them to drive the *māhindārs* to work and to recover the advances which they had forced upon them. These powers the *malangīs* cruelly abused, and gross oppressions were perpetrated by the salt officials. They insisted on receiving back Rs. 20 for every Rs. 4 which they had advanced; and when Mr. Henckell came to the district, the *māhindārs* appealed to him for protection. The Government Salt Agent resented interference on the part of the Judge, and there was open war between the Judge's bailiffs and the salt subordinates.

At length, in 1787, Mr Henckell submitted proposals for the reform of the Salt Department, and to give the system a fair trial offered himself to undertake the duties of Salt Agent. The plan would, he said, have the advantage of uniting in the same individual, namely himself, the power to deal with the claims on the *māhindārs* for rent, and the claims on them that arose out of salt transactions. The Governor-General, Lord Cornwallis, approved his proposals and directed him to take charge of the salt agency so far as the Raimangal division was concerned, Mr. Ewart having to confine himself to the Backergunge side. Subsequently, in December 1788, rules were issued containing all the elements of reform which Mr. Henckell had previously proposed. The salt boilers were to be free to engage or not as they liked, and the Salt Agent was made their protector instead of their slave driver. All advances, whenever possible, were to be given to them direct, as oppression was found to be generally due to the middlemen. This change was not effected without a great deal of friction. Mr. Ewart refused to give over charge of the transferred division, carried on work there as before, and objected to giving up the offices and godowns at Khulnā, declaring that they were, in part at least, his own property. However, the change was at last effected and put an end for the time to the constant quarrels between the Departments.

Mr. Henckell was succeeded in 1789 by Mr. Rocke, who carried out the Permanent Settlement in this district and Jessore.

He apparently began his service in Jessore in 1781 as Registrar under Mr. Henckell, and when he succeeded him in his office, he continued his policy. "In fact," writes Sir James Westland, "the fruits of Mr. Henckell's administration are for a long time visible in the history of the district; and it is certain that its early records derive great interest from the fact that it was two such men as Henckell and Rocke, who were at the head of affairs during the time which intervened between its first establishment in 1781 and the completion of Lord Cornwallis' reforms, which by 1793 had changed the first crude attempts at district government for a system substantially the same as that which ever since has prevailed."

SUNDARBANS ADMINISTRATION. Early surveys.

The subsequent history of the district is mainly that of the development of the Sundarbans.* In 1810 Captain Robertson surveyed the main water routes from Calcutta as far as Noākhāli, and in 1811 survey operations were taken in hand, the Sundarbans, exclusive of the sea-face, being surveyed by Lieutenant W. E. Morrieson during the years 1811-14, his results being corrected by his brother Captain Hugh Morrieson in 1818; the latter died at Jessore of jungle fever, contracted while surveying in this unhealthy tract. This great work, carried out in spite of many dangers and difficulties, has been the basis of all subsequent maps of the Sundarbans. To Lieutenant Morrieson, moreover is due the cut known as Morrieson's cut, which opened out a new route for trade. Finding in the course of his survey that the north-east branch of the Raimangal estuary approached to within a very short distance of the Kālindī, he made a cut joining the two rivers. But the opening of this channel had an unexpected result. At that time cultivation extended further south on the east bank of the Kālindī than on the west, and as the stream of the Kālindī very soon enlarged the cut, a large quantity of its fresh water was diverted into the Raimangal, and a considerable tract, being deprived of its supply, reverted into jungle.

Legislation.

The advantages that the State might gain from the opening up of the Sundarbans were now clearly perceived, and in 1814 the Court of Directors directed that settlements should be concluded with the actual occupiers for the lands already brought under cultivation, while holding out reasonable encouragement

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* This account of the administration of the Sundarbans has been compiled from the *Revenue History of the Sundarbans from 1765 to 1870* (Calcutta, 1885) and an article *Cameos of Indian Districts—The Sundarbans,* also written by Mr. Pargiter, published in the Calcutta Review, October, 1889.

for further reclamation. Their instructions seem to have led to the enactment of Regulation IX of 1816, which provided for the appointment of a Commissioner in the Sundarbans, and vested him with all the duties, powers and authority of a Collector of land revenue. The first Commissioner was Mr. D. Scott. Subsequently, in Regulation XXIII of 1817, Government expressly declared that the Sundarbans were the property of the State and asserted its right to the revenue of lands not included within the boundaries of estates for which a settlement had been made. In 1822 and 1823 Mr. Prinsep surveyed the line of forest from the river Jamunā to the Hooghly and divided all the forest lands between those rivers into blocks which he numbered, this being the beginning of the "Sundarban lots."

All the circumstances of the lands being made known by these surveys, attention was next directed to the claim of the State to demand revenue both from the recently reclaimed lands and also from the forest. The land-owners on the contrary claimed to hold all these lands and the forest as part and parcel of their estates at the revenue fixed at the Permanent Settlement and free from increased revenue. Finally, the rights of the State over recent cultivation and over the forest were conclusively decided in favour of the State, and this right was fully stated as follows in Regulation III of 1828:—"The uninhabited tract known by the name of the Sundarbans has ever been, and is hereby declared still to be the property of the State, the same not having been alienated or assigned to zamīndārs, or included in any way in the arrangements of the perpetual settlement. It shall therefore be competent to the Governor-General in Council to make, as heretofore grants, assignments, and leases of any part of the said Sundarbans, and to take such measures for the clearance and cultivation of the tract as he may deem proper and expedient."

Mr. William Dampier was now appointed Commissioner, and Lieutenant Hodges Surveyor, with jurisdiction over the whole of the Sundarbans in Khulnā and Backergunge. They defined and surveyed the line of forest from the Jamunā up to the eastern limit of the Sundarbans during the years 1829 and 1830; and Mr. Dampier formally affirmed Prinsep's line in the 24-Parganas in 18.32-33. "Prinsep's line" and "Hodges' line" are the authoritative limits of the then Sundarbans forest; while the map prepared by Lieutenant Hodges from his own surveys and those of his predecessors has been the standard map of the Sundarbans ever since. The subsequent administration of the Sundarbans will be dealt with in Chapter XI, and it will suffice

here to mention that the settlement of land with lessees has gone on steadily ever since, and almost the whole area available for settlement in this district has now been taken up.

Morrellganj.

One of the most important events in the subsequent history of the Sundarbans is the foundation of Morrellganj, which had also been an important factor in the development of the district. Some squatters had made a clearing in the forest there about the year 1840, but no further progress was made till Messrs. R. and T. H. Morrell bought three large blocks of land in 1849. The estate then consisted of dense Sundarbans forest and the first attempts to clear it were impeded by the timidity of the people. But very soon the proprietors gained their confidence, and labour poured in on all sides. By 1851 about 10,000 men were at work, in a short time a river frontage of 9 miles was cleared and brought under cultivation, and a considerable proportion of the men engaged in the work settled down as permanent cultivators. The undertaking was greatly facilitated by the advantages the land possessed, in being well raised and having excellent river frontages with plenty of fresh water. At the north-east corner, on the bank of the main river, and where two other rivers join it, the Morrells built a town which they called Morrellganj after themselves. They established a mart, which quickly became the most important in this part of the country; a police station, a sub-registration office and a dispensary were located there; and the neighbourhood was converted from jungle into a fertile country covered with rice fields and dotted with prosperous villages.

The value of this work may be gathered from the minute recorded in 1860 by the Lieutenant-Governor, Sir John Peter Grant, on the Report of the Indigo Commission. "What an enterprising European can do both for himself and for the people, when he marries his interest to theirs, is shown in a conspicuous manner by the evidence of Mr. Morrell. In 10 years Mr. Morrell has cleared 60,000 to 65,000 *bighās* (upwards of 20,000 acres) of Sundarbans jungle. He has granted his cleared land under permanent *pāttās* at a rent of Re. 1-2 a *bighā* never liable to enhancement; he gets as many ryots as he wishes, but they repudiate the system of advances, fearing that "eventually they may have to take to *nīl* or indigo," though they know of indigo only from common report. Mr. Morrell told me that the building of a good two-storied brick house on his grant was one of the most fortunate things he did, because it assured the *pāttādārs* and ryots that he would stay amongst them; and it will be seen in his evidence that the same people, who were so anxious to keep him near them, on one occasion, when his gardener had sown in his garden some

indigo seed that had been sent from Calcutta in a packet of seeds by mistake, on the plant growing up, "insisted upon having it pulled up and thrown away." Mr. Morrell has in 10 years created for himself an estate which cannot now be worth less than from £80,000 to £1,00,000, and, in doing so, he has covered what were 20,000 acres of uninhabited jungle with a happy and thriving population, anxious to keep him near them. This he has accomplished by working on sound principles, to the profit of the people instead of to their loss."

FORMATION OF THE DISTRICT. Till 1882 Khulnā was included partly in the Jessore district and partly in the district of the 24-Parganas. A subdivision, the first established in Bengal, had been set up at Khulnā in 1842; its chief object, according to Sir James Westland, "being to hold in check Mr. Rainey, who had purchased a zamīndāri in the vicinity and resided at Nihalpur, and who did not seem inclined to acknowledge the restraints of law." The jurisdiction of the Subdivisional Officer extended not only over the present Khulnā subdivision, but also over almost the whole of the present Bāgherhāt subdivision. The Bāgherhāt subdivision was subsequently constituted in 1863. Both this and the Khulnā subdivision formed part of the Jessore district, while the Sātkhirā subdivision, established in 1861, was included in the 24-Parganas. Eventually, the Local Government came to the conclusion that the formation of a Sundarbans district with its headquarters at Khulnā was absolutely necessary, in order to lighten the work in the great suburban district of the 24-Parganas, and to relieve the District Officer of Jessore of part of his heavy charge. The advantages of having the headquarters at the Khulnā terminus of the new Bengal Central Railway (now the Eastern Bengal State Railway) were many; and the same grounds which rendered it desirable that the Sundarbans should be connected by railway communication with Calcutta, pointed conclusively to the choice of Khulnā as the headquarters of the new district. The sanction of the Government of India and of the Secretary of State having been obtained, a notification dated the 25th April 1882, which took effect from the 1st June of the same year, declared that the new district should consist of the Sātkhirā subdivision of the 24-Parganas, and of the Khulnā and Bāgherhāt subdivisions of the Jessore district, the headquarters being at the town of Khulnā.

The Sundarbans tract to the south still remained, however, under the control of the Commissioner in the Sundarbans until 1905, when it was decided that it was no longer expedient to continue this arrangement. The appointment of a special officer for the Sundarbans in 1816 had been necessary both because the

country was extensive, wild and inaccessible, and the important work of developing its resources was beyond the capacity of the Collectors of the adjoining districts. It was felt that the necessity of having an officer with independent powers had disappeared, and that it was desirable that this tract should be administered entirely by the Collectors of the districts concerned. This was not a very great change, for, the administration had long been conducted by the District Officer, with the exception of making settlements and holding enquiries to see if the conditions of the settlement leases had been carried out. The District Officer already controlled excise, education, police, crime, *chaukīdāri*, the opening out of communications, and other branches of administration, and it was now decided that he should also exercise control over the important matters connected with settlements. Accordingly in 1905 the Sundarbans Act (Bengal Act I of 1905) was passed, by which Regulation IX of 1816 was repealed, the office of the Commissioner in the Sundarbans was abolished, and his functions were transferred to the Collectors of the districts within which the Sundarbans are comprised.

ARCHÆOLOGY. The most interesting archæological remains are found at Bāgherhāt in the extreme east of the district, where there are the tomb of Khānja Alī (1459 A.D.), the tomb of his *dīwān* Muhammad Tāhir, a large single-domed mosque, and another mosque with nine domes. There are many other ruined mosques on the way to the building known as Sātgumbaz or mosque of 77 domes, a large oblong building covered by 77 domes with one tower at each corner. In the extreme west of the district there are some ruins attributed to Pratāpāditya at Iswarīpur and close by at Tīrkati and Tezkati. The foundation walls of other buildings are also met with in the cultivated tract; and the forest in the vicinity is said to contain several temples and mosques, old roads and tanks. Another trace of former cultivation in this part of the district is still found in a large embankment which extended from the Kholpetuā to the Kabadak river, a distance of three miles. The embankment is close to the northern boundary of Sundarbans lot No. 167 and south of the village of Pratāpnagar. Towards the east it is broken in places, but it is continuous on the west for a distance of more than a mile and is still 30 feet in height with a base of 90 feet. The place is called Garh Kamālpur, but no one knows who made the embankment or for what purpose it was erected.

Across the Kabadak river a large area is scattered over with bricks, and the foundations of old buildings are seen in several

places. When the jungle was cut down here nearly 50 years ago, several large tanks and the remains of an old road were discovered, all indicating that the place must have been once cleared and peopled. Here also were found 38 silver coins, two of which were ascertained to be coins of Ghiās-ud-dīn Balban, dated 1274 A.D. and apparently struck in Bengal, and of Nāsir-ud-dīn Muhammad. About 12 miles east and a little south of the ruins last referred to, on the east bank of the Marjal river, are the ruins of what appears to have been a fort, enclosed court-yard, or square, built of burnt country bricks, and enclosing a tank about 120 feet square. This is situated about 500 yards from the Marjal river in allotment No. 233. The most perfect wall was not more than five feet in height, and its extreme length was 380 feet. The cornice bricks, and those inside the arches, were cut or chiselled out with rough figures and ornamentations. There are also said to be ruins of various buildings in the interior of this island, and among others, there is a mosque or temple said to have an arched roof, and to be in a tolerably good state of preservation. Twelve miles north in a direct line are some ruins at Masjidkur on the east bank of the Kabadak river. The name, which means the digging out of a mosque, was given to the place by the pioneers of cultivation who unearthed a mosque, which is still used by the local Muhammadans. The structure is clearly contemporaneous with the Sātgumbaz, and this is confirmed by the local tradition that the mosque, was built by Khānja Alī, and by the fact that offerings are made at this mosque in the name of Khānja Alī, and that in the adjoining village of Amadi there are ruins which are said to have been the *kachahri* or office of Bura Khān and Fateh Khān, lieutenants of Khānja Alī, as well as two tombs which mark their resting place.

Historically the remains mentioned above are of value. The mosques at Iswarīpur and Masjidkur, the silver coins, which belong to the time of the Moslem Emperors, the Muhammadan names of such places as Tīrkati and Tezkati near Iswarīpur, the tradition that Iswarīpur before Pratāpāditya's time belonged to Musalmān rulers of the Khān race, all point to the conclusion that the country east of the Jamunā was under Muhammadan rule at a comparatively early date.*

The remains found from time to time in clearing forests and reclaiming land have given rise to the belief that the Sundarbans formerly supported a thriving population and was largely under

* *Antiquities of the Sundarbans,* Statistical Reporter, 1876

cultivation. To this belief may be ascribed the origin of the legend, mentioned in the field books of Lieutenant W. E. and Captain H. Morrieson nearly a century ago, that near the mouths of the Mālanchā and Jamunā there is a palace which is still inhabited: during the stillness of night the great drums of the palace and the bells may be heard, but in the day time no such noise is noticed. This belief has been rejected by authorities such as Mr. Beveridge and Professor Blochmann. The latter writes:—"I have a few words to say on the hypothesis which has often been started, that the whole of the Sundarban was once in a flourishing condition. No convincing proof has hitherto been adduced; and I believe, on physical grounds, that the supposition is impossible. The sporadic remains of tanks, *ghāts*, and short roads point to mere attempts at colonization. The old Portuguese and Dutch maps have also been frequently mentioned as affording testimony that the Sundarban, even up to the 16th century, was well cultivated; and the difficulty of identifying the mysterious names of the five Sundarban towns Pacaculi, Cuipitavaz, Noldy, Dipuria (or Dapara) and Tipaña, which are placed on the maps of Be Barros, Blaeve, and Van den Broucke close to the coast line, has inclined people to believe that they represent "lost towns." The old Portuguese and Dutch maps prove nothing. They support the conclusion which I drew from Todar Mal's rent-roll, that in the 24-Parganas and Jessore the northern limit of the Sundarban, omitting recent clearings, was in the fifteenth century much the same as it is now." *

Mr. Beveridge also writes in his article *Were the Sundarbans inhabited in ancient times?*—"This is a question which has excited a great deal of attention. The Bengali mind, as being prone to the marvellous and to the exaltation of the past at the expense of the present, has answered the question in the affirmative and maintained the view that there were formerly large cities in the Sundarbans. Some Bengalis also have suggested that the present desolate condition of the Sundarbans is due to subsidence of the last, and that this may have been contemporaneous with the formation of the submarine hollow known as the "Swatch of no ground." It seems to me, however, to be very doubtful indeed that the Sundarbans were ever largely peopled, and still more so that their inhabitants lived in cities or were otherwise civilized."

Mr. Beveridge also points out in this connection that the fact that Vikramāditya chose Jasor Iswarīpur as a safe retreat is the

* *Geography and History of Bengal*, J.A.S.B., vol. XLII, Part I, 1873 (p. 231).

strongest possible evidence of the jungly nature of the surrounding country, for though it had been cultivated in the previous century by Khānja Alī, the experiment had proved a failure, and in the time of his successor (?) Chānd Khān the land had relapsed into jungle. He then sums up as follows:—"It seems to me that the Sundarbans have never been in a more flourishing condition than they are in at present. I believe that large parts of Bākirganj and Jessore were at one time cultivated, that they relapsed into jungle, and that they have soon been cleared again; and I have also no doubt that the Courts of the kings of Baklā and of Ciandecan imparted some degree of splendour to the surrounding country. But I do not believe that the gloomy Sundarbans on the surface of Jessore and Bākirganj were ever well peopled or the sites of cities." *

* J.A.S.B., vol. XLV, 1876.

CHAPTER III.

THE PEOPLE.

WHEN the first census was taken in 1872, the population of the district as now constituted was returned at 1,046,878.* In the succeeding decade there was a small increase of by 3·1 per cent., the number of inhabitants rising to 1,079,948. The only thānas which shewed a decrease were Asāsuni and Morrellganj, where the decline was attributed mainly to the abandonment of clearances in and near the Sundarbans following upon the sale of the Morrell estate. During the next 10 years both thānas recovered their losses, and there was a general advance except in Kalāroā and Baitāghātā, where there was a slight falling off attributed to the fact that the population had reached the limit which the soil was capable of supporting. The net result was that in 1891 the total population was returned at 1,177,652, representing an increase of 9 per cent. During the next decade this advance continued, and the census of 1901 disclosed a population of 1,253,043. GROWTH OF POPULATION.

Two points call for notice regarding these enumerations. The first is that the returns depend to a large extent on the labourers from other districts who happen to be temporarily in the district at the time of the census and whose number varies with the season. How greatly these temporary immigrants affect the figures in some parts may be realized from the fact that the decrease observed in the Asāsuni and Morrellganj thānas in 1881 was ascribed partly to the fact that "the census of 1872, having been taken early in the year, included a great number of reapers, who come from all parts to cut the rice in the Sundarbans of this district, and who had finished their work and returned when the census of 1881 was taken in a later month." If a census were to be taken in the hot weather, the population of certain parts would be found to be less than is actually returned, for the temporary immigrants would be absent, and only the

* The district was constituted in 1881. In 1872 two of its subdivisions, Khulnā and Bāgherhāt, formed part of the Jessore district, and the third, Sātkhirā, of the 24-Parganas.

fixed and permanent population would be enumerated. Even in the cold weather a few days' difference in the dates of enumeration may make a considerable difference in the result, for the crop may be more plentiful and the harvest more forward in one year than in another, resulting in a larger influx of labourers.

The second feature which calls for notice is the number of persons accounted for by the boat population. In 1881 the latter represented 3·7 per cent. of the whole population, in 1891 over 30,000 were enumerated in boats, and in 1901 the number was 15,090. Even these figures do not include all the boating population. For the term "boat population" includes only those persons found sleeping in boats on the night of the census, and not that numerous class of boatmen, who, though spending their time afloat, come ashore to sleep every night, or those travellers or traders who moor their boats to the bank at nightfall at some convenient village and are thus enumerated among its inhabitants.

Census of 1901. The results of the census of 1901 are summarized as follows in the Bengal Census Report. "The census of 1901 shows that the population has grown by 6·4 per cent., compared with 9 per cent. in the previous decade, and 3·1 per cent. in the nine years prior to 1881. This is the net result of an increase of 17·7 per cent. in the headquarters subdivision, and 6·6 per cent. in Bāgherhāt, coupled with a falling-off of 1·5 per cent. in Sātkhirā. In the latter subdivision again the decrease is practically confined to two thānas, Kalāroā and Asāsuni. In Kalāroā it is due to the prevalence of malaria and to repeated attacks of fever. In this thāna the vital statistics shew a considerable excess of deaths over births, while in the district at large the number of births reported exceeds that of the deaths. There has also been some emigration to the clearances in the Sundarbans, where there is a great demand for labour and wages are two or three times as high as in Kalāroā. Asāsuni, which also shows a large decrease, has a very fluctuating population. The cause of the falling-off has not been clearly ascertained. For some reason the extension of cultivation in the Sundarbans is proceeding far more slowly in this subdivision, and in Bāgherhāt, than in the adjoining thānas of the 24-Parganas and of the Khulnā headquarters subdivision. Sātkhirā itself, which shows a slight decline, has suffered from the diversion of the boat traffic between Calcutta and East Bengal to channels further south; the health of the people has also been unsatisfactory. The growth of the Bāgherhāt subdivision is normal and calls for no special comment. Cultivation is being steadily extended into the

shallow *bils* which form so marked a feature of this part of Bengal. In the headquarters subdivision the most noticeable item in the statistics is the increase in the population of Pāikgāchā thāna which has grown by nearly 50 per cent. during the decade. This is owing to the progress made in pushing back the jungles of the Sundarbans, and to the settlement of cultivators on the new clearances, which attract cultivators not only from other parts of the district, but also from Nadiā, Jessore, Farīdpur and other districts. The total number of immigrants has fallen off considerably since 1891, but they are more numerous by nearly 27,000 than they would have been, had no fresh settlers come in to the district. Taking the ebb and flow together, the district seems to have gained by the movements of the population during the decade to the extent of from 20,000 to 25,000 persons. It should be noted, however, that many of the Sundarbans cultivators are not permanent settlers, but continue to reside in their old homes, and only visit the Sundarbans when ploughing or harvesting operations are in progress."

The following table shows the salient statistics of the census of 1901 :—

SUBDIVISION.	Area in square miles.	NUMBER OF		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.
		Towns.	Villages.			
Khulnā	649	1	929	401,785	619	+ 17·7
Bāgherhāt ...	679	...	1,045	363,041	535	+ 6·6
Sātkhirā ...	749	2	1,467	488,217	652	− 1·5
DISTRICT TOTAL	2,077	3	3,441	1,253,043	603	+ 6·4

GENERAL CHARACTERISTICS.

Density of population.

In the table given above the density of population is shown as 603 persons to the square mile, but these figures exclude the Sundarbans with an area of 2,688 square miles; if this tract is included, the density of the district falls as low as 263 persons to the square mile. The Sundarbans tract, however, has scarcely any permanent population, except along a narrow belt, which abuts on and is practically part of the settled tract to the north. The inhabitants of this narrow cultivated belt are included in the police circles to which they lie nearest, and the only other inhabitants are a few fishermen, wood-cutters and hunters, living in its southern fastnesses and insignificant in number, whom it would be impracticable to enumerate.

In the district, as a whole, the density of population is determined by the physical features of different tracts. The northern part of the Sātkhirā subdivision is a fairly densely populated tract, resembling in its general physical characteristics the adjoining thānas of Jessore, but the drainage is bad; there are numerous swamps, and malaria is always present. Here the Kalāroā thāna supports 806 and the Sātkhirā thāna 738 persons per square mile. Until 1901 Kalāroā was the most densely populated thāna in the district, but it has now changed places with Khulnā thāna, where there are 851 persons for every square mile. "I know by personal experience," wrote the Magistrate in 1891, "that all the land in the Kalāroā thāna has already been cultivated, and there is no room for any expansion of cultivation. While the southern thānas import labour largely for transplanting and reaping paddy, Kalāroā, like the neighbouring thānas of Jessore, which it resembles in many respects, exports it." He anticipated that the population of Kalāroā had reached its limit, and the decline observed in 1901 shows the correctness of his forecast.

The other northern thānas are also low-lying, and *bils* are large and numerous, but the country is more open and there is less jungle, while the stagnant pools and tanks, which are so common in north Sātkhirā, are rarely seen. In these thānas there is still room for expansion, and much of the *bil* land is capable of reclamation. Here the density varies from 419 per square mile in Baitāghātā to 851 per square mile in Khulnā. The southern thānas include large areas in the Sundarbans, where there is an immense quantity of fertile land awaiting the axe and the plough. The jungle is steadily being pushed back, and every year more land is being brought under cultivation. A great deal of the work of reclamation is carried out by persons whose permanent homes are elsewhere, but the number of regular settlers is gradually growing. Here the Rāmpāl thāna supports 388 persons per square mile and is the most thinly populated part of the district.

Migration.

At the census of 1901, the number of residents of other districts enumerated in Khulnā was 65,717, representing 5 per cent. of the population. Most of these came from contiguous districts, especially Backergunge and Jessore, which supply many of the cultivators on new clearances in the Sundarbans, but a large number also came from Farīdpur. The number of immigrants from these three districts alone was 48,482. Some of the immigrants have settled permanently in the district, but the excess of males shows that many are still domiciled elsewhere. Among

immigrants from distant places may be mentioned the Bunās, an aboriginal tribe, who have come from Bānkurā and Burdwān and settled in the neighbourhood of Khulnā. They migrated here with their women and children for the purpose of clearing jungle; and many remained to cultivate land on their own account.

The great majority of the immigrants, however, only come for a time to cultivate the marshy land which is so plentiful in the district. Such land is too low to be used for permanent habitation and it is accordingly largely cultivated by people, locally known as *dāwāls*, who come from other and more densely peopled tracts, erect temporary huts, and go away after growing and reaping their paddy. This temporary population is increased during the reaping season by a population of a still more temporary character, viz., the reapers, who return to their homes as soon as the harvest has been gathered. A number of fishermen also come every year from Chittagong, build huts in the Sundarbans, and remain for three or four months after the rains, catching and salting fish. Besides these, a fair number of up-country men come to the district to trade or to seek employment as constables, day labourers, door-keepers, grooms, sweepers, shoe-makers, etc., but they generally return to their homes after they have made a little money.

Generally speaking, the only immigration of any magnitude, which has been taking place in recent times, is that of cultivators from Backergunge who settle down on newly-reclaimed lands in Morrellganj. Professional men from Jessore also find employment in the courts and offices at Khulnā, but otherwise immigration is either very insignificant in its dimensions or ephemeral in character, *e.g.*, a doctor comes from Hooghly, a pleader from the 24-Parganas, and a retired Deputy Magistrate from Calcutta, reapers come for a short time from Jessore and Nadiā, and boatmen pass through from Dacca and Pābna.

The volume of emigration is not large, only 25,883 or 2 per cent. of the population being enumerated in other districts at the census of 1901; and of these 19,683 were enumerated in contiguous districts. The struggle for existence has not yet become at all keen, except in thāna Kalāroā; both cultivators and labourers earn enough at home, and therefore do not find it necessary to go to other districts to earn a living. In Kalāroā wages are low, and the landless classes periodically go elsewhere to earn something to eke out the wages they get at home. They do not, however, find it necessary to leave the district, but only go to the southern thānas, where they help

to reap the plentiful harvests, and then return home, bringing with them the wages earned by them in money and kind. In the same way, Hindus of high caste living on the banks of the Kabadak, the Bhadrā or the Bhairab, who find that they cannot get a sufficient quantity of fertile land in their own neighbourhood, turn their eyes to the fertile south, obtain a *gānthi* or large allotment, settle it in plots with the actual cultivators, and maintain their families on the difference between the rents they receive and those they pay.

Towns and villages.

In Khulnā there is not much distinction between the urban and rural population, for there are no industries or manufactures necessitating the formation of towns, and almost the entire population subsists on agriculture. There are 3 towns, Khulnā, Sātkhirā and Debhātā, containing altogether 24,236 inhabitants, representing 2 per cent. of the population. The remainder of the population is contained in 3,441 villages, the majority of which are of no very large size, for 46 per cent. of the rural population live in villages containing under 500 inhabitants and 47 per cent. in villages with between 500 and 2,000 inhabitants. These villages are found almost entirely in the more settled tracts to the north of the district, the villages in the south being few in number and consisting generally of a cluster of cultivators' huts. In the Sundarbans they are even fewer and smaller, for the settlers there do not tend, as in other places, to group themselves into villages, this being probably one result of their having holdings so large that it is most convenient to live near them. But whatever the cause, many of the village names on the map represents no sites of villages as we usually understand a village, but wide stretches of waving paddy, with homesteads scattered about them, where the cultivators' families live apparently in perfect seclusion.

Language.

The language commonly spoken is the dialect of Bengali, called eastern or Musalmān Bengali, the distinguishing feature of which is a large admixture of Persian and Arabic words in its vocabulary. A minor dialect is that known as east-central Bengali or the form of eastern Bengali spoken in this district, Jessore and the greater part of Farīdpur. Hindī, according to the census of 1901, is spoken by 4,716 persons as compared with 3,540 in 1881, a fact which points to an increased demand for labourers from up-country.

RELIGIONS.

The population is almost equally divided between Muhammadans and Hindus, the former numbering 632,216 or 50·46 per cent. and the latter 619,123 or 49·41 per cent. There are

very few members of other religions, Christians numbering 1,275 and members of all other religions only 429.

Census statistics for the last 20 years show that the proportion of Muhammadans in the population is gradually decreasing, while that of Hindus is steadily increasing. This appears to be due to the fact that the Muhammadans make but few proselytes, though some Hindus may here and there lose caste and adopt the religion of Islām, and to the fact that a large proportion of the Hindus consist of castes of aboriginal descent, such as Chandāls and Pods, who are extremely hardy, industrious and thrifty, while their habits, which are almost amphibious, specially qualify them for living in the fen country which forms so large a part of the district. It is true that a large proportion of the Musalmāns also are descendants of converted Chandāls and Pods, but their conversion is said to have brought about changes which have rendered them unfit to compete with their unconverted congeners. In the first place, many have ceased to be fishermen, and consequently have given up the amphibious life which is of such great service to the Chandāls and Pods; and in the next place, the consciousness that their religion is one of a race of conquerors and rulers, the polygamous habits which they have adopted, and the seclusion of their females, have combined to impair their habits of hardihood, thrift and industry, and to render them pleasure-loving and indolent. Muhammadans.

Muhammadans preponderate in thāna Kalāroā, while their proportion to the total population is least in thānas Baitāghātā, Pāikgāchā and Asāsuni. These variations are probably due to their greater or less adaptability, and to the circumstances of the different thānas, and not to any loss or gain in the vitality of the two religions, which, so far as Khulnā is concerned, have almost ceased to be active forces. In Kalāroā, where the struggle for existence has become very keen, the Musalmāns are more inured to poverty and want than the Hindus, among whom there are no large hardy classes of semi-aboriginal descent, like the Chandāls and Pods, who would probably have competed successfully with the Musalmāns. Similarly, in Baitāghātā, Pāikgāchā, and Asāsuni, the comparative paucity of Muhammadans is attributed to competition with the Chandāls and Pods.

There appears to be little doubt that this district was originally peopled by the Chandāls and Pods, the former occupying the eastern and the latter the western half of it. In all probability, they were originally hunters and fishermen, the Pods following the latter calling almost exclusively, while some of the Chandāls were hunters also. When the higher Hindu castes migrated into Hindus.

the district, they occupied the comparatively high lands on the banks of the rivers; while the Chandāls and Pods were driven into the jungles to the south of the district, or to the low marshy tracts between the different rivers. Thus, we find the high caste Hindus settled mainly along the banks of the Jamunā, Betnā, Kabadak, Bhairab, and along the Naukhāli and its continuation, the Sātkhirā *Khāl*—the former of which must have been a river of some size at one time, though it has now silted up; while the Chandāls and Pods live in the intervening marshes and in the jungles to the south. Apparently the only case in which high caste Hindus penetrated very far south was when Pratāpāditya founded Iswarīpur; and this seems to have been due to the fact that he was in search of a safe refuge for himself and his adherents, and went further afield than he would have otherwise done.

Christians.

Of the 1,275 Christians enumerated in 1901, no less than 1,228 were natives, the great majority being converts of the Baptist Mission, which has been at work in this district for about 40 years. At first, the headquarters of this Mission were at Jessore, the missionary in charge there visiting the Christians living in the Sundarbans, but as the Christian community increased, a separate missionary was appointed for Khulnā. The Mission now has 18 churches and 24 schools in the district and carries on its work mostly amongst the cultivating classes in the Sundarbans. The Oxford Mission also has a station at Shelabuna, a Sundarbans village situated on the Passur, about 30 miles south of Khulnā; and there are some Roman Catholic Christians at Mālagāchi in the Sundarbans, who are visited occasionally by their priests. The number of Christians has increased considerably in recent years, rising from 747 in 1881 to 963 in 1891 and to 1,275 in 1901. Nearly the whole number are inhabitants of thānas Khulnā, Pāikgāchā and Rāmpāl.

Some popular beliefs.

In a district such as Khulnā, where a large proportion of the population consists of semi-Hinduized castes of aboriginal descent, where the people suffer from fever and other diseases in the more settled parts, and where attempts to reclaim the waste are endangered by the attacks of wild animals, it is not altogether surprising that the more ignorant should believe in spirits or deities, who can be induced, if duly propitiated, to ward off disease and to protect them from danger in the forests. Among the godlings of disease two may be mentioned—Jwara Nārāyan and Sītalā.

Jwara Nārāyan and Sītalā.

Jawara Nārāyan, also known as Jwara Bhairab and Jwarāsur, is the name given to the fever godling. He is said to have been specially created by Siva to fight on the side of Bān

Rājā, when appealed to by that monarch for help against Krishna's invading army. His image is of a sky-blue colour, with three heads, three feet, six hands and nine eyes. He is worshipped mainly by the lower castes with the aid of a Brāhman priest, when malarial fever is prevalent or when a member of the family recovers from a dangerous illness. Goats are sacrificed, and offerings are made of rice, fruit, milk and sweets. The worship is performed on a Tuesday or Saturday at some place outside the village, and the idol is left there afterwards. Sītalā is the well-known goddess of small-pox, but in Khulnā she is regarded by the Pods, not merely as the goddess of small-pox, but as their main deity. If a person is carried off by a tiger, or his crops are destroyed by wild animals, it is thought that it is because he has incurred the displeasure of Sītalā.

Exorcism of wild animals.

An even more curious instance of superstition is the exorcism of wild animals in the Sundarbans, of which the following account is condensed from an article by Mr. D. Sunder, formerly Commissioner in the Sundarbans*:—

Those who have visited the Sundarbans between the months of October and May have observed the brisk trade which is carried on during that period in timber. Wood-cutters come in boats from Barisāl, Khulnā, Farīdpur, Calcutta and other districts, and enter the forests of the Sundarbans for the purpose of cutting timber. These places are full of man-eating tigers, and the loss of life that annually occurs from the attacks of these brutes is so heavy that nothing will persuade wood-cutters to proceed to the jungles without their *fakīr*. He is the one person who is believed to possess power to disperse tigers, and also to prevent them from attacking anybody or causing loss of life. The belief in the power of the *fakīr* is so great that wood-cutters and others declare that even crocodiles, which are also the cause of great loss of life, are under his control. It is said that he can make them rise or sink in water by his charms, and by his exorcisms close their mouths and prevent them from doing any harm.

No work is begun in the forests by wood-cutters, until the *fakīr* has gone through his charms and incantations, and has performed a ceremony for the dispersion of all noxious animals. On arrival at the block of land selected for the wood-cutting operations, the *fakīr* repeats a charm for the safety of the boat and then goes ashore with the wood-cutters and select a piece of ground on which to propitiate the deities. The jungle is cleared there, and the *fakīr* makes a circle on the ground with his right

* *Exorcism of Wild Animals in the Sundarbans*, J.A.S.B., Part III, 1903.

foot and then repeats more incantations. After this, he builds seven small huts, with stakes and leaves, within his circle. Beginning on the right, the first hut is dedicated to Jagabandhu, the friend of the world, and the second to Mahādeva, the destroyer. The third is assigned to Mansā, the goddess of snakes; next to it a small platform is erected in honour of Rupapori, a spirit of the jungle; and beyond this again is a hut divided into two compartments—one for Kālī, the other for her daughter Kālīmāyā. Then there is another small platform, on which offerings are made to Orpori, a winged spirit of the jungle; after this is a hut with two compartments, one being for Kāmeswarī and the other for Burhī Thākurānī, and then a tree, called Rakshyā Chandī (another name for Kālī), the trunk of which is smeared with vermilion. No offerings are made to it. Then come two more huts, with two compartments in each and flags flying over them. The first hut is reserved for Ghāzi Sāheb and his brother Kālu, and the next is for his son Chawal Pīr and his nephew Rām Ghāzi. The last deity propitiated is Bāstu Devatā (the earth), who has no hut or platform, but receives offerings placed on plantain leaves on the ground. The offering to the different deities are simple enough, consisting of rice, plantains, coconuts, sugar, sweetmeats, etc.; *chirāghs* or small earthen lamps are lit; pots of water covered with mango leaves and decorated with an image of the deity in vermilion are put out; and flags are hung over the huts.

When everything is ready and the offerings have been arranged, the *fakīr* retires to purify himself. He has a bath, and returns wearing a *dhotī* provided for him by the wood-cutters, with his hands, arms, and forehead smeared with vermilion. Then, with hands folded before his face, he goes on his knees, bows his head to the ground, and remains in this attitude for a few seconds before each of the deities in succession, offering up prayers to each of them. After finishing his prayers, the *fakīr* proceeds to ascertain whether a tiger is present in the locality or not, bidding it roar on the right or left according to its position. He then blows over his arm, and spans it from the elbow to one of his fingers. If the span meets the end of any finger exactly, the *fakīr* waits a few minutes and spans a second time. If the span fails to meet the same finger exactly, it is a sign that a tiger is present and the *fakīr* has to drive it off. He is said to be able to do this by repeating an incantation:—"In the name of my brothers Hingli, Bingli and Mangala, and the horses of Ghāzi Sāheb, also in the name of Barkat (God). O mother Kāmeswarī, thou art uppermost in my

mind. I have put Azrael, the rider, on the backs of the tigers and tigresses of this jungle. Go eastward, thou of colour of fire; go eastward or westward, go to the right-about, I command thee, and feed thyself by killing deer and pig. If this my charm fails, may the top-knot of Mahādeva fall at the feet of Kālī." Hingli, Bingli and Mangala, mentioned in this charm, are said to be deities of the jungles and the fathers of tigers, while Azrael is alleged to be a spirit who always rides on the backs of tigers.

The *fakīr* then repeats charms for the protection of the wood-cutters and himself. After this, in order to close the eyes of the tiger, the *fakīr* repeats an incantation, beginning—"Dust! dust! The finest dust be on thy eyes, O tiger and tigress." Special charms are repeated, if a tiger is seen in the jungle prowling anywhere near the wood-cutters, or is believed to be in their vicinity, or if the growl of a tiger is heard anywhere near the place where wood-cutting is going on. "That the *fakīr* is thoroughly believed in by wood-cutters," writes Mr. Sunder, "there is no doubt, and it is equally certain that his charms and exorcisms give them courage to enter the forests and embolden them to work there, notwithstanding the variety of dangers by which they are surrounded. Without him they would be utterly helpless. That his exorcisms and incantations have little effect has been proved, for it often happens that the *fakīr* himself, instead of the wood-cutters, is carried off by the tiger."

Mr. Sunder also mentions some quaint instances of superstitious beliefs about tigers common among the people who inhabit or work in the Sundarbans. "There is a superstition that the tongue of a tiger is a sure remedy for enlarged spleen. It may be taken in two ways. A small piece should be cut and put within the upper part of a ripe plantain, and the patient should bite that part of the plantain and swallow it the first thing in the morning, for five consecutive days. Another way is to grind a bit of the tongue with a peppercorn into a paste, mix it with a little *hukkah* water, and drink it every morning for seven days. The whiskers of a tiger are considered to be a cure for foot-and-mouth disease among cattle. A few hairs of the whiskers should be tied in a piece of cloth to a leg of the sick animal, and it is believed that all vermin on the cattle will instantly drop off. The fat of a tiger is also much sought after, for it is believed to be an infallible remedy for rheumatism. It should be rubbed over the affected parts of the body night and morning. The skin of a tiger is considered to be a cure for ophthalmia. It should be burnt and ground into a paste with *hukkah* water and applied all

round the affected eye. Tiger claws are often worn by men and women as a charm against attacks from tigers. Children sometimes wear tiger claws mounted on silver as a charm against the evil eye.

"When a tiger carries off a *mānjhi* of a boat, the helm used by him is removed from the boat and planted with the blade upwards on the spot where the man was killed, and a piece of white cloth, with some rice tied in a corner of it, is attached to the helm. When a boatman is killed by a tiger, his oar is planted, blade upwards, on the place where he was attacked, and a white flag, with some rice tied in a corner of it, is fixed to the oar. If any person attempt to remove either the helm or the oar and fail to draw it out of the ground by a single pull, it is believed that he will be killed by a tiger; but nobody ever interferes with the simple memorials to the dead, which are seen on the banks of streams and in the jungles throughout the Sundarbans." *

Adoration of *pīrs*.

Ghāzi Sāheb and his brother Kālu mentioned in the above account are said to have been Muhammadan *pīrs* or saints, who had complete power over all living things. It is believed that they possessed the power of bringing to pass whatever they desired, and that tigers would come to them or disperse at their command; also that they used to ride about the jungles on tigers. They are venerated both by Muhammadans and Hindus, and whenever any person desires to enter any jungle, he first bends to the ground, with hands folded before his face, and says: "In the name of Ghāzi Sāheb." Having done this, he goes into the jungle, believing that Ghāzi Sāheb will keep him perfectly safe. *Fakīrs* and others are unable to say who Ghāzi Sāheb was; but in the Bengal Census Report of 1901, Mr. Gait writes as follows:—"Zindah Ghāzi from Zindik-i-Ghāzi, 'conqueror of infidels,' rides on a tiger in the Sundarbans, and is the patron saint of wood-cutters, whom he is supposed to protect from tigers and crocodiles. He is sometimes identified with Ghāzi Miyān and sometimes with Ghāzi Madar. One Muhammadan gentleman tells me he is Badiruddin Shāh Madar, who died in A. H. 840 fighting against the infidels. Songs are sung in his honour and offerings are made after a safe return from a journey. Hindu women often make vows to have songs sung to him if their children reach a certain age. His shrine is believed to be on a mountain called Madariā in the Himālayas."

Another *pīr* of great local repute is Khān Jahān, or as he is known locally Khānja Alī, the warrior saint of the Sundarbans, whose history has been given in the previous chapter. Various

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* *Exorcism of Wild Animals in the Sundarbans*, J.A.S.B. Part III, 1903.

traditions cling to his name—among others, that he became pious in his old age and entered his tomb while still alive to escape from a punitive force sent against him by Jahāngīr. He is now regarded as a saint; miraculous cures are said to be effected at his tomb; and there is a special yearly festival when people come to make offerings.

Muhammadan classes. According to the census of 1901, no less than 291,785 Muhammadans are Sheikhs and 284,573 are Atrāf or Ajlāf, the only other class with more than 10,000 representatives being Jolāhās, who number 26,937. The higher classes form a very small minority, only the Pathāns (9,183) and Saiyads (3,370) numbering over 1,000.

Ashrāf and Atrāf. Locally, however, the most common classification is that of Ashrāf and Atrāf. The former are the descendants of pure Musalmāns, who came into the district from Northern India; the latter are the descendants of semi-Hinduized aborigines, principally Chandāls and Pods, and of low caste Hindus, who were converted to Islām. The word Ashrāf is the plural of Sharīf, and the designation means therefore the patricians or nobles, while the word Atrāf, which is the plural of *taraph*, is commonly understood as meaning the common people or the masses, the low born or the plebeians. The people to whom it is applied do not demur to its use and frankly admit their inferiority to the Ashrāf. They do not, however, know or admit that they are descendants of converts to Islām; according to them, they are the tillers of the soil, while the Ashrāf do not cultivate the land with their own hands. The latter title is scrupulously confined to those families who are pure Musalmāns by extraction, and it is only they who use the tribal titles of Saiyad, Mīr and Khān. The Atrāf carefully avoid the tribal titles used by them, except that of Sheikh. In addition to the title of Sheikh, which serves to mix up the Ashrāf and Atrāf to some extent, the latter have distinctive titles of their own, such as Sardār, Ghāzi, Mandal or Moral, etc. As in the case of the Hindus, the Ashrāf who first migrated into the district took up their abode on the banks of the rivers, while the Atrāf, like their unconverted brethren, dwelt in the jungles in the south of the district or in the marshy tracts which lie between the rivers.

Hindu castes. The only Hindu castes numbering over 25,000 are the Chandāls, Pods, Kāyasths, Kaibarttas and Brāhmans. A brief account of each of these castes is given below:—

Chandāls and Pods. By far the most numerous Hindu castes in Khulnā are the Pods and the Chandāls, or as they now call themselves, Namas or Namasūdras. The former number 190,507, and the latter

105,495; and between them they account for nearly one-third of the total Hindu population. The Pods are described as being the most hard-working and thrifty people in the district, and their habits and mode of life as exceptionally well-suited to the circumstances of the country in which they live. They are, moreover, peace-loving and law-abiding, and not at all litigious. The Chandāls, who, with the Pods, are believed to have been the original settlers of the district, are, in their habits and modes of life equally well-suited to the circumstances of the district, but have not increased in the same proportion. They are less thrifty than the Pods and have probably always been more pugnacious and less peaceful than the latter. At any rate, the less advanced members of the Chandāl caste are now extremely turbulent; and with the Musalmāns, many of whom are descended from the same ancestors, they are responsible for most of the riots that take place in the district.*

At the same time, it should be stated that, as a community, the Chandāls or Namasūdras shew considerable aptitude for organization and that the ideals pursued by the better classes among them seem praiseworthy. As an instance of this, may be mentioned a conference recently held (in March 1908), which was attended by Namasūdras from Khulnā, the adjoining districts, and some districts of Eastern Bengal. From the published reports it appears that its objects were the spread of education, the establishment of a permanent fund, and the removal of social evils. In pursuance of those objects, the following resolutions were passed:—"(1) That the Namasūdra conference be made permanent by yearly meetings to be held in different districts for the discussion of social matters and the spread of education. (2) That a village committee be formed in every Namasūdra village, and unions of 15 such villages, and a district committee in every district. (3) That for acquiring funds for a Namasūdra contribution fund, village committees, unions and district committees be authorized to collect subscriptions. A handful of rice should be set apart before meals in every family, and collected weekly by the village committee. Every member of village committee will pay a monthly subscription of one anna, of unions two annas, and of district committees four annas. Three per cent. of the expenses incurred in *srāddha*, marriages and other occasions must be reserved for this fund. (4) That as some active measure should be adopted towards social reform, it is resolved that any Namasūdra marrying his son under

* The above account is derived from the District Census Report of 1891.

20 or daughter under 10 will be excommunicated. The committees and unions must be specially careful about strict compliance with this resolution."

The following story regarding the origin of the Pods and Chandāls is current in Khulnā:—A beautiful girl succumbed to the blandishments of a low-caste lover and gave birth to a son. The intrigue and its result were kept secret, and in due course the girl was married to a man of her own rank in life. She had several other sons, who were brought up in comfort, while her first-born shifted for himself as best he could. When the legitimate children grew up, they learnt the story of their mother's frailty and persecuted their half-brother in all possible ways. Once, when he was away from home, they pulled up his paddy seedlings and planted them upside down. This was more than the bastard could bear, and he was about to commit suicide when the goddess Lakshmī appeared and caused the plants to bear a crop of golden grain. The bastard is said to be the ancestor of the Pods, while the legitimate sons were the forebears of the Chandāls.*

Kāyasths. The Kāyasths, who number 39,385, are chiefly Dakshin Rārhis, except those who live in the south and west of the Sātkhirā subdivision, who are principally members of the Bangaja sub-caste. These latter belong to the Tākī Samāj, and acknowledge as their leaders the Bābus or Rājās of Nunnagar, who are said to be the descendants of Kachu Rai, the cousin of the celebrated Pratāpāditya.

Kaibarttas. The Kaibarttas, who number 36,167, are agriculturists and fishermen, who in many respects possess qualities similar to those of the Pods. But they are not so well-suited to the circumstances of the district, as they cannot adapt themselves in the same manner to land subject to be inundated by salt water.

Brāhmans. The Brāhmans of the district are mainly Rārhi, with a small sprinkling of Bārendra Brāhmans. Besides the Rārhi and Bārendra Brāhmans found all over the district, there is a small colony of Kānyakubja or Kanaujiā Brāhmans in the villages of Gairā and Chandanpur close to Chānduriā in its extreme north-western corner. Some of these families appear to have been established in their present homes for four or five generations, while others say that they immigrated seven generations ago. The head of one of the former families states that his ancestors first came to, and settled in, Murshidābād; but later on, during the troublous times of the Marāthā invasions, they sought

* J. A. S. B., Vol. LXXII, Part 3, 1903.

and found shelter in the locality in which they have since been established.

Baidyas. The other high castes have but few representatives, and it is noticeable that the Baidyas, who are so numerous elsewhere, number only 1,641. They are almost entirely Rārhis and appear to have been established in this district in comparatively early times. Most of the leading families of this caste have some tradition to the effect that they came from other districts to the north and west, but they cannot give any definite information on the subject.

Pirālis. Among other castes found in Khulnā may be mentioned the Pirālis, the descendants of Hindus who became Muhammadans because they were outcasted for having been forced to taste or smell forbidden food cooked by a Muhammadan. Some only of the Pirālis are Muhammadans, and many of them still retain Hindu beliefs and customs. Others have succeeded to a certain extent in recovering their original caste and have remained Hindus. They are said to be named after a Brāhman apostate, named Pīr Alī, the *dīwān* of Khān Jahān or Khānja Alī, who ruled in Khulnā about four centuries ago. Tradition says that he became a Muhammadan in consequence of a trick played upon him by Khānja Alī. The story goes that during the Ramzān the Brāhman presented Khānja Alī with a bouquet of flowers, and when he inhaled the perfume, had the imprudence to reproach him for breaking the fast, saying "In our *Sāstras*, it is written that smelling is half eating, (*āghrānam ardha bhojanam*)." The Nawāb took a grim vengeance. Some time afterwards, he gave a banquet to which he invited the Brāhman, and when the latter entered the room, had a door opened, behind which a steaming broth of beef was being prepared. The unfortunate Hindu at once raised his cloth to his nose to keep out the polluting odour, but his attempt was vain and the Nawāb taunted him in his own words:—"Let me remind you that, according to your *Sāstras*, smelling is half eating." The Hindu's caste was gone, and he was obliged to turn Musalmān, adopting the name of Muhammad Tāhir, though he is more generally known as Pīr Alī. It is said that the great Tagore family of Pāthuriāghātā in Calcutta are descended from the son born to him while still a Brāhman.*

SOCIAL CHARACTERISTICS. The dietary of the great majority of the people is a simple one, consisting principally of rice, fish and vegetables, but Muhammadans indulge in animal food when they can afford it.

* See also *Hindu Castes and Sects* (pp. 119-124) by Jogendra Nāth Bhaṭṭāchārya.

As a rule, the first meal is taken in the morning before the work of the day begins; there is a slight repast at noon; and all finish off with a meal about nine o'clock at night. Food.

The ordinary dress of a well-to-do man consists of a waist-cloth (*dhutī*), a cotton sheet or shawl (*chādar*), and sometimes a sort of coat (*pirān*). A cultivator in average circumstances clothes himself in a waistcloth, and a scarf (*gāmchā*) which he wears over his shoulder, the material being of stouter and coarser cloth than that of a shopkeeper's dress. In the cold season, the shopkeeper wears a *chādar* or shawl of broadcloth, about 3½ yards in length, not made up in any way, but simply cut from the piece; while the cultivator wears a *chādar* of stout cotton cloth, with a *kānthā*, or large cotton quilt, as a covering at night. Coats, vests, shirts and comforters are now sometimes used even by cultivators and boatmen, and cheap imported woollen wrappers are gradually replacing country-made cotton *chādars* for winter wear. By women the *sārī* is universally worn, one end being draped over the head and shoulders and fastened to the waist piece. Clothing.

The houses are not clustered together in villages, as that term is understood in other parts, but each is practically a homestead, standing in its own little patch of land and surrounded by a small orchard of fruit and palm trees. The highest ground available is selected; and where the site is low, it is laboriously raised by excavation, with the result that there are hollows and pits in every compound, which in the rains are filled with stagnant water. A respectable shopkeeper's house is built of *sundrī* posts, bamboo, and reed mats. The floor, which is of mud, is raised two or three feet above the surface of the ground. The sides of the house are made of reed mats, with spilt bamboos laid across, which are sometimes painted black. The roof is thatched with straw, *san* grass (a slender long grass which does not easily rot in the rains), and *golpātā* or the leaves of the *hantāl* or wild date plam. The hut consists of one room about 30 feet long by 15 feet broad, with narrow verandahs in front and at the back, with mud steps leading to them. It has usually two doors placed opposite to each other, the panels being set in wooden frames. On each side of the door are windows to admit air and light. In addition to this building, a shopkeeper has also a cooking-house, where he and his family take their meals, a cow-shed, and two or three granaries (*golās*) for storing rice. These are situated at a short distance from the shop, but the whole of the buildings forming the homestead are surrounded by a fence composed of reeds plaited together. Houses.

The walls of the cultivators' houses are built of mud or consist of reed mats, with bamboo or *garān* posts, the roof being thatched. The floor is made of mud, generally raised about three feet above the level of the outside ground, but in the better class of houses floors raised to the height of six or eight feet are not uncommon. The house of a husbandman in moderate circumstances has usually about five rooms; the principal room has a narrow verandah in front, with mud steps leading up to it. On one side is a small room used as a kitchen: sometimes, however, the cook-room is a separate hut. On the other side is another small room where the women of the family husk rice; and there are also a granary and a cow-shed, detached from the house.

In the town of Khulnā, as well as in the interior, many substantial houses, generally one-storeyed, have of late been constructed by well-to-do people, especially zamīndārs and pleaders; but the middle and poorer classes live in huts as described above. The number of brick-built houses is gradually increasing.

Amusements. The principal amusements of the people consist of various musical and theatrical entertainments, boat races, horse races, etc. A popular entertainment consists of matches between *kabir-dals, i.e.*, parties (*dal*) of singers (*kabi*), of which there are reported to be 300 or 400 in this district. Each party consists of eight or ten men, with a headman, who is the real *kabi*. Two rival parties are hired t ogive a performance on some festive occasion, either in private houses or at common meeting places in the villages, the charge being Rs. 20 or Rs. 25 a night. The headman of one party recites impromptu verses, which are repeated by his followers, and then the other party follows suit. The verses recited generally deal with some religious theme, but in their keenness to outdo one another, the performers, at least in public places, rally and ridicule their rivals with rhymes of an abusive character. The whole performance is thus often strikingly like that described by Horace: "*Fescennina per hunc inventa licentia morem Versibus alternis opprobia rustica fudit.*" The *kabis* are generally recruited from low class Hindus, but there are some Muhammadans among them; leading *kabis* are found at Mansā, Fakīrhāt and Boāliā.

The *jātrā* is an entertainment of a higher class, consisting of the performance of a mythological piece, generally selected from the *Rāmāyana* or *Mahābhārata*. The performers are organized parties of musicians called *jātrāwālās*, each party consisting of men and boys who represent different characters; the female parts are taken by some of the boys or men with clean-shaven

faces. They sing, dance, and also give musical concerts. The *jātrāwālās* are professional men, who are hired out to give performances in the houses of well-to-do people on the occasion of the Durgāpūjā or other religious and wedding festivities. They are also engaged for the *bārayāris* organized by the people of one or more neighbouring villages, who raise subscriptions amongst themselves to pay their fees. Usually, the performances are given at night, and continue for several nights; they are keenly enjoyed by the simple rustics, male and female, Hindu and Muhammadan. There are three or four local *jātrā* parties, and occasionally parties of special skill are engaged from other districts or Calcutta. They charge Rs. 50 to Rs. 100 for a night's performance. The educated middle classes in Khulnā, Bāgherhāt and Sātkhirā, and in advanced villages like Senhāti, Mulghar and Māgurā, have also formed themselves into amateur dramatic societies, their performances being given at night in houses built and set apart for the purpose.

The *bārayāris* mentioned above also play an important part in village life, nearly every big village having a place called the *bārayāritalā* for their performance. Several influential men of one or more villages form themselves into a committee, styling themselves Pāndā, and raise a fund for the performance of the *bārayāri*. When a sufficient sum—it may be Rs. 100, Rs. 200, or more—has been collected, they decide on the best way to spend it. As a rule, a small portion is spent on the *pūjā* of some god, godling, or goddess, such as Kālī, whose image is set up under a shed, in front of which bamboo posts are erected, forming a quadrangle. A *shāmiānā* or canopy is spread over them, and mats and *darīs* are laid out for the audience; enclosed seats are also provided for *pardānashin* women of respectable families. Some goats are sacrificed before the image, and the subscribers then partake of a feast provided from the *bārayāri* fund. Either a *jātrā* or *kabi* party, or both when funds permit, are hired, and their performances are enjoyed for several days and nights by the people of the neighbourhood, who come in large numbers to see them. In the village of Tilak, opposite Khulnā, a *bārayāri* on a grand scale is celebrated every year and is the occasion of a large fair. Muhammadans also willingly join in the *bārayāris*, although Hindus are the principal organizers, Hindu idols are worshipped, and the *jātrā* and *kabi* parties perform Hindu mythological pieces.

Another musical entertainment is called *ghāzirgān*, which consists of songs sung in honour of Ghāzi after the cultivating season is over. The Muhammadans at this time go about in

small bands of 8 or 10 men singing such songs on receipt of small fees. The Hindus similarly form *bhajandār* parties, *i.e.*, 10 or 12 persons form themselves into a party and sing songs in praise of Siva and Gaurī during the Nīlpūjā festival to the great delight of the rustics.

Here, as elsewhere, kite-flying matches between parties of about four men are a popular amusement. The matches are governed by rules regarding the size of the kites, the length of the string, etc. The strings are coated with powdered glass stuck on with glue, and each party tries to manœuvre its kite so as to cut the string or, even better, the end of the rival kite. Races between country-bred ponies of different villages take place during various festivals, the principal villages engaging in this sport being Chhāglādaha, Solpurhāt, Ghāzirhāt, Siromani and Daulatpur. Swimming matches are also general.

Boat races are even more popular, as is only natural in a district where almost every man is a boatman. They are held practically all over the district, and among other places at Khulnā, Kālābīr, Katenga, Chhachaidaha, Nagorkandi, Laupāla, and Bāgherhāt. The racing canoes or boats are 50 to 100 feet long, and are manned sometimes by as many as 50 pairs of rowers. The villagers who form the crew come each with his own paddle, for practically every man in this fen district has a paddle of his own. These races are a picturesque sight and give rise to the wildest excitement. The boats sweep along with great speed, while the rowers keep time to the songs of a man standing up in the boat, and catch up the refrain.

Festivals. Numerous festivals and fairs are held at different places in the district. Among these may be mentioned the fairs held at Budhhātā in the Sātkhirā subdivision during the Hindu festivals of Rāsjātrā, Durgāpūjā and Kālīpūjā; at Asāsuni during the Doljātrā; at Jhāudāngā during the Snānjātrā; at Khesrā during the Rāsjātrā; and at Kalinā and Nunnagar in alternate years during the Doljātrā held in honour of Gobind Deb, whose idol was brought from Orissa by Pratāpāditya, the Hindu hero of the Sundarbans. Similar fairs are held at Nawāpārā and Sankarkhāli, two small villages in the Bhalukā *pargana*, during the Durgāpūjā, Doljātrā and Rathjātrā; at Sātkhirā on the occasion of the Doljātrā, which lasts for 8 days; at Kapilmuni in the Khulnā subdivision in the middle of March, for 13 days; and at Madinā in the same subdivision in March for 3 days. The following fairs are held annually in the Bāgherhāt subdivision:— at Maghiā in April for one month; at Nagorkandi in the middle of November for 15 days; at Bāgherhāt on the occasion of the

Srīpanchamī for one month; at Laupāla during the Rathjātrā for nine days; at Chitalmāri in April for 15 days; at Karapārā on the 30th Chaitra (April) for 4 days; at Baniaganti on the 10th Paus (December) for 4 days; at Lokpur in October for 10 days; at Rāmpāl on the 1st Phālgun (February) for one month; at Malgazi in the latter part of Phālgun (March) for 10 days; at Morrellganj in Baisākh (April) for one month; at Banagrām in Chaitra (March) for 10 days; at Badhal in Phālgun (February) for 15 days; at Rangdiā in Chaitra (March) for 15 days; at Kachikātā in April for 10 days; and at Mansā in November for 15 days.

CHAPTER IV.

PUBLIC HEALTH.

GENERAL CONDITIONS.

It is impossible to describe Khulnā as a really healthy district, but on the other hand it is not conspicuously unhealthy, and it is undoubtedly more salubrious than the northern districts of the Presidency Division, viz., Jessore, Murshidābād and Nadiā.

The most unhealthy part is the northern tract adjoining Jessore, in which conditions are similar to those obtaining in that district. This tract is traversed by a number of rivers, which have been raised above the level of the surrounding country by the gradual deposition of silt, and the villages generally cluster in their neighbourhood. Between the river channels there are numerous marshes, and during the rainy season large areas are under water either from the overflowing of the rivers or from local rainfall. On the drying up of the land extensive *bils* remain, many of which contain water all the year round. Some are connected with the river by *khāls* or creeks and are regularly flushed out at flood time; but in other cases the *khāls* have partially silted up, so that they are flushed only when the floods are unusually high; while others again are unconnected with the rivers, and the water in them lies stagnant for the greater part of the year.

In this tract the villages generally consist of a number of separate homesteads scattered over a considerable area. The houses are built of split bamboo and are usually raised on a mud plinth, cattle-sheds are built in close proximity to them, and the whole collection of huts encloses a central courtyard, towards which they face. The mud for the plinth, etc., is taken from pits dug in the immediate neighbourhood, and after the rainy season these pits remain full of water for a long time. The villages thus abound in patches of broken ground and hollows, which get filled with water and rubbish, and become overgrown with rank vegetation. High grass and underwood grow rank in the groves which surround each little cluster of homesteads, the soil remains damp for a long time after the rains, and the ponds and casual collections of water in the villages

evaporate very slowly. The supply of drinking water, moreover, is often bad. Villages on the banks of rivers take it directly from the stream, but in such cases it is generally obtained at a spot which is also used as a bathing *ghāt*. If there is no river or stream close by, the villagers get their drinking water from tanks, which are also used for washing and other domestic purposes, and are usually dirty and overgrown with weeds. Should there be not even a tank, the drinking water is drawn from some pool, and is frequently unfit for consumption.

Conditions are better in the central portion of the district, for though the land is generally marshy and water-logged, it is more open and the jungle is less dense. It cannot be said, however, that this tract is a desirable one for residence, for it is practically a fen country. The villages are necessarily built along the higher land adjoining its numerous waterways, the water-logged tracts in the interior being unfit for human habitation. Marshes covered with rank vegetation abound, and it is not always possible to procure good drinking water. The general climate is better, however, than in the north, though sickness is common from August to September, and fever, with diseases of the liver and spleen, is often present.

To the south of the cultivated area human habitations are few, as there are no suitable sites for villages ; and fresh water is obtained but rarely. The waterways being practically the only means of communication with outside places, the bulk of the people have their houses along or near the banks of *khāls*, which are closely shut in by jungle, while the state of the water in them increases their insalubrity. If the *khāl* is open, the tide flows in and out, and leaves, except at high tide, a bank of mud, which is as much as 10 or 12 feet high in places near the sea. If the mouth of the *khāl* has been dammed, the water is necessarily stagnant and unwholesome. Good fresh water, it is said, is often more difficult to procure than food; but the people apparently become inured to these conditions and drink water that is slightly brackish, apparently without any deleterious consequences.

VITAL STATISTICS.

The system of registering births and deaths now in vogue was introduced in 1892. Under this system vital occurrences are reported by the *chaukīdārs* through the presidents of *panchāyats* to the police, and the latter submit monthly returns to the Civil Surgeon, by whom statistics for the whole district are prepared. These returns, though unreliable as regards the causes of mortality, are at least sufficiently accurate for the purpose of calculating the approximate growth of the population,

the relative healthiness or unhealthiness of different parts of the district, and its salubrity or insalubrity as compared with other districts.

Applying this latter test, we find that, with the exception of the 24-Parganas, Khulnā is the least unhealthy district in the Presidency Division, and that here as elsewhere the greatest mortality is returned under the head of "fever."

District.	Average annual death-rate per mille from all causes.		Average annual death-rate per mille from fever.	
	For ten years 1896-1905.	For five years 1901-1905.	For ten years 1896-1905.	For five years 1901-1905.
Jessore	37·6	39·2	31·2	32·4
Nadiā	37·0	42·0	28·8	33·3
Murshidābād ...	35·7	37·7	28·0	29·7
Khulnā	33·4	32·3	22·0	20·8
24-Parganas ...	27·4	28·3	18·8	18·3

As regards the growth of the population, during the nine years ending in 1900 the number of births reported largely exceeded the number of deaths except in Kalāroā thāna, where there was a considerable excess of deaths; and in the subsequent seven years (ending in 1907) there was an excess of 67,500 births. As regards the healthiness of different years, the greatest mortality recorded since 1892 (when the present system was introduced) was in 1900, when there was a death-rate of 38·80 per mille, and the least was in 1893 when it fell as low as 27·27 per mille. The highest birth-rate is 43·97 per mille recorded in 1902, and the lowest 25·50 per mille recorded in 1892.

PRINCIPAL DISEASES.

Fever.

A special enquiry has recently been made regarding the prevalence of malarial fever in Khulnā, and the results are summed up as follows in the Report of the Drainage Committee, Bengal, published in 1907. "The Khulnā district exhibits four areas which may perhaps be differentiated, viz., that to the north-west, where the land is raised ordinarily above flood level, the population is dense, and the general conditions are similar to those in Jessore; the north-eastern portion from the Jessore boundary southwards to the latitude of Bāgherhāt, where the land is low and covered with swamps, but the country is more open and there is less jungle; the central portion representing the area of the Sundarbans, which has been cleared and populated in fairly recent times; and the uncleared Sundarbans to the south. The last named tract may be excluded from consideration.

"*A priori* it would seem probable that the central portion of the district would be more healthy than the northern strip, and the statistics show this to be the case, but the district as a whole is not abnormally feverish. The figures of total mortality in different thānas bear a fairly constant relation to the death-rates from fever, except perhaps in Māgurā, which is rather more feverish, and Asāsuni rather less so, than the total death-rate only would presume. Judging from the average annual fever rate in the whole district (1901-1905), viz., 20·8 per mille, the thānas showing a proportion per mille of 25 and over may be classed as specially unhealthy, and those of 15 and under as the reverse. Upon this basis we find in Khulnā the healthy thānas of Kālīganj and Pāikgāchā closely followed by Asāsuni and Rāmpāl, all along the central line bordering upon the Sundarbans, while Kalāroā and Māgurā in the north-west corner, and Mollāhāt on the north-east, all show fever rates which, for the district, are high. The fluctuations in population exhibited by the census figures corroborate these results, except in the case of Mollāhāt (+5·6). The population in Māgurā between the two last censuses was practically stationary, while in Kalāroā (−10·1) it decreased noticeably. Sātkhirā (−1·7) also showed a small diminution, which its position in the fever list would scarcely anticipate, and the census report of 1901 mentions unsatisfactory health as a cause, although loss of trade by the diversion of the boat routes was also operative. The statistics of total births and deaths for five years (1901-1905) show an excess of births everywhere, although it was very small in Mollāhāt, and not large in Kalāroā, thus according generally, though not conspicuously, with the deductions made above.

"Local opinion is perhaps inclined to consider the district as more malarious than the statistics corroborate, and the District Magistrate remarks that there is a general belief that the district is malarious; but there is no evidence to suppose that malarial fever has considerably increased in any part in recent times, nor is there evidence to support the fact that there has been in recent times any decrease of population or failure to cultivate land on this account. The specially unhealthy areas particularly named by the local officers consist of villages scattered throughout the district, and the statement does not permit of verification without detailed enquiry. Local opinion was particularly emphatic regarding the unhealthiness of Sātkhirā, and the decrease of population between 1891 and 1901 is some corroborative evidence, but the figures scarcely support the statement made to us that malaria is "rampant" throughout the subdivision, and we are inclined to

think that the bad reputation of the subdivisional headquarters is partly due to the fact that it is more conspicuous than other villages.

"The only detailed local enquiry of recent times touching the Khulnā district is that of Captain Sinha, I.M.S., Deputy Sanitary Commissioner, made in March 1895 in the Kalāroā thāna, where an average spleen rate of 37·4 was found, about half the cases examined being adult and half children. So far as we can judge, there is no special reason for supposing the main proportion of fever in Khulnā to be other than malarial, and we submit the following conclusions regarding the district. (*a*) It is not conspicuously unhealthy in any part; (*b*) malaria is prevalent, but not especially so; (*c*) the most malarious thānas are Kalāroā, Mollāhāt, Māgurā and perhaps Sātkhirā; and (*d*) the least malarious are Kālīganj, Pāikgāchā, Asāsuni and Rāmpāl."

As regards the types of fever prevalent it is reported they are mostly malarial intermittent and remittent. The types of intermittent fever are generally quotidian, sometimes tertian, and occasionally quartan. In cases of remittent fever there is often constipation, and sometimes diarrhœa, nausea and bilious vomiting. Bronchitis is also often present, and in severe cases jaundice and delirium may occur. The fever persists for a week to two weeks, sometimes longer, and then it gradually passes off, unless there are other complications, either of the brain or, as often happens, of the lungs, or of the bowels— when the patient dies of coma or heart failure or of exhaustion from diarrhœa or dysentery. The sequelæ of malarial fevers are the same here as in other districts. There is enlargement of the spleen, which is often of an abnormal size, enlargement of the liver, jaundice, sometimes cirrhosis of the liver and hæmorrhage from the stomach and bowels, malarial cachexia and cancrum oris, dyspepsia, diarrhœa and dysentery—which last is very common. Anæmia and dropsy occur early in the course of the disease.

The dampness of the country, with low-lying badly-drained villages and abundant vegetation all round them, is the chief factor in the causation of the disease. The villages are built near river banks, and as the banks are gradually being silted up and raised, natural drainage is stopped, and the country thus spreads out into large marshy tracts. The houses, moreover, are surrounded by pit and hollows used as cess-pits; dirty tanks overgrown with weeds are numerous; and the villages, being imbedded in jungle, are shut out from ventilation and sunlight. Stagnant water, with decomposing vegetation, abounds; and

there is, therefore, a large area available for the breeding places of the anopheles mosquito, and consequently for the spread of the disease.

Cholera.

Next to fever the greatest mortality is caused by cholera, which is endemic in the district and sometimes breaks out in a severe epidemic form. This disease has almost invariably a characteristic rise and fall. The season of its prevalence begins in October, and continues until the rains have well set in. It is at its maximum in December, and at its minimum when the country is more or less under water, and the ground saturated with moisture.

Other diseases and infirmities.

Diarrhœa and dysentery generally prevail when the river water, which is largely drunk, becomes brackish. Small-pox has almost disappeared, very few deaths being caused by it from year to year. Infirmities, such as insanity, deaf-mutism, leprosy and blindness, are comparatively rare. According to the census of 1901 only 44 males and 38 females per 100,000 are insane, and 62 males and 43 females per 100,000 are deaf-mutes.

As regards the difference between the sexes, the usual causes of insanity, viz., progress of civilization, its consequent wear and tear of nerve tissues, consanguineous marriages, and general ill-health, affect men and women, in a rural district like Khulnā, to an almost equal degree. The only cause which affects men in a greater degree than women, viz., the use of drugs and spirits, does not operate to any large extent in this district, where the men are extremely temperate and abstemious. They certainly smoke *gānja*, though not in excessive quantities; and this fact may cause the small difference between the numbers of male and female insanes. In the case of deaf-mutes the difference may be due to the concealment of the occurrence of the infirmity among females at the time of the census. It is true that it is very difficult to conceal the fact that a girl is a deaf-mute from an enumerator, when she is less than 9 years of age, but as soon as she grows older and is married, or otherwise secluded, concealment becomes easy.

Only 58 per 100,000 males and 37 per 100,000 females are blind, and there can be no doubt that the district is singularly free from the conditions which are injurious to eye-sight. Glare and heat, huts filled with fœtid and pungent smoke, and the attacks of small-pox, which are the inducing causes of so much blindness elsewhere, are almost entirely absent; and the vivid green of the landscape and the cool breezes which blow almost throughout the year are extremely soothing to, and good for, the sight.

Lepers are rarer than in most Bengal districts, only 12 per 100,000 males and 5 per 100,000 females being returned as lepers in 1901. Leprosy is not endemic in this district, and the majority of its victims are to be found among the Bunās, who have come to the district from West Burdwān and Bānkurā, where the disease is unusually prevalent. The popular theory current in this district about leprosy is that it is caused by eating beef, and also by over indulgence in articles of food which have a heating effect. There is, however, no evidence, even of a plausible character, to support the theory. Beef is scarcely ever eaten in this district even by Muhammadans, and "articles of food which have a heating effect" is too vague and general a description for any conclusion to be based on the supposed effects of their consumption. It may be added that the people live principally on rice and fish, but most of the fish that they consume is fresh and wholesome, and not rotten or imperfectly cured. On the whole, however whatever, may be the cause, there can be little doubt that the people of this district enjoy comparative immunity from this dreadful disease.

VACCINATION. Vaccination is compulsory within the limits of the municipalities of Khulnā, Sātkhirā and Debhātā, where paid vaccinators are employed. In the rural areas, where vaccination is voluntary, the operations are performed by licensed vaccinators employed from September to March, who charge 2 annas for each successful case. There is no particular prejudice against vaccination, but it appears to be less popular than in other districts of the Division, the ratio of persons successfully vaccinated being 29·82 per mille in 1906-07 and 30·13 per mille in the previous 5 years, as compared with 35·16 and 32·56 per mille respectively for the whole Division.

MEDICAL INSTITUTIONS. There are three public charitable dispensaries with accommodation for indoor patients, viz., at Khulnā, Bāgherhāt and Sātkhirā, and 15 dispensaries which afford relief to out-patients only, viz., at Daulatpur (opened in 1866), Kalāroā (1896), Tālā (1896) known as the Diamond Jubilee dispensary, Kāliganj (1897) known as the Vincent dispensary after the then Collector, Mollāhāt (1898), Chāndkhāli (1899), Nawāpārā (1900), Dumriā (1904) known as the Satish Chandra Mukherji dispensary after a former Collector, Rāmpāl (1906), Dākupi (1906) known as the Iswar Chandra dispensary, Sibbāti (1906), Pāikgāchā (1907), Debhātā (1907), Senhāti (1907), and Char Bāniāri (1907). A few years ago the District Board also started a "Floating Dispensary" to give immediate medical aid in cases of epidemic disease in the

distant interior of this river district, but apparently it failed to effect much good and was eventually closed.

The dispensary at the headquarters station of Khulnā was founded in 1864 and is called the Woodburn Hospital after the late Lieutenant-Governor of Bengal, Sir John Woodburn, K.C.S.I., whose visit in 1898 gave an impetus to the institution. It has 17 beds for men and 7 beds for women, besides one bed in Mrs. Collin's Zanāna Cottage Ward recently opened, and it is maintained by a grant from the local municipality and by other funds. The dispensary at Sātkhirā has 3 beds for men and 7 beds for women and is supported by the municipality there. The District Board maintains the Bāgherhāt dispensary, which has 10 beds for men and 2 beds for women. The Daulatpur dispensary is mainly supported by the Saiyadpur Trust estate and is in charge of a Civil Hospital Assistant, who is paid by Government. The rest are maintained by the District Board and are in charge of local native doctors having the qualifications of Hospital Assistants.

Besides the above, which are public dispensaries, there are three private dispensaries at Morrellganj, Banagrām and Nakipur, which are maintained by the zamīndārs of those places. The dispensary at Morrellganj is maintained by Mahārāj Kumār Rishi Kesh Law, that at Banagrām, which is called the Bindu Bāshinī dispensary, by Srīmatī Kamal Kumārī Chaudhurānī, and that at Nakipur by Rai Hari Charan Chaudhuri Bahādur.

CHAPTER V.

FORESTS.

GENERAL DESCRIPTION.

THE forests reserved by Government in Khulnā extend over 2,081 square miles, but of this area water channels account for more than 500 square miles. They are situated in the tract known as the Sundarbans between the southern limit of cultivation and the Bay of Bengal, and occupy numerous islands of varying sizes formed by the network of channels connecting the larger rivers and estuaries. The latter are subject to tidal influence, and the islands are inundated by salt water during high spring tides, except in the east, where the water of the Baleswar and other rivers is fresh during the rainy season owing to the large volume poured into them from the Ganges.

The forests are bounded on the north by the cultivated lands of the district, on the east by the Bholā and Baleswar rivers, on the south by the Bay of Bengal, and on the west by the Raimangal estuary and Jamunā river. The whole of the northern portion of this area is covered with forests composed of *sundrī* (*Heritiera minor*), which deteriorate gradually towards the west and south, as the water of the rivers becomes more and more saline. There the predominating species is *garān* (*Ceriops candolleana*), and *sundrī* is less frequent and of inferior quality. The other principal species of most general distribution are :—among *Meliaceae*, *passur* and *dhundul* or *gamur* (*Carapa moluccensis*), and *amūr* (*Amoora cucullata*); among *Leguminosae*, *karanj* (*Pongamia glabra*) and *shingar* (*Cynometra ramiflora*); among *Rhizophorae*, *kankra* (*Bruguiera gymnorhiza*); among *Lythraceae*, *keorā* (*Sonneratia apetala*) and *orā* (*S. acida*); among *Verbenaceae*, *bāen* (*Avicennia officinalis*); and among *Euphorbiaceae*, *gewā* (*Excoecaria Agallocha*). By far the most valuable species is *sundrī*, which is gregarious and occurs either pure or with an insignificant admixture of inferior trees, wherever conditions are suitable for its development. Its southern limit as a tree of any size may be said to be the

This chapter has been prepared mainly from a note contributed by Sir H. A. Farrington, Deputy Conservator of Forests, formerly in charge of the Sundarbans Division.

sea at Tiger Point, and thence a line running in a north-westerly direction to the junction of the Kālindi and Raimangal rivers.

The most important minor products besides honey and wax are:—among *Palmae*, *hantāl* (*Phoenix paludosa*), *golpātā* (*Nipa fruticans*), which is a useful thatching material, *sānchibet* (*C. Rotang*), and *golabet* (*C. Longipes*); and among *Gramineae*, *nal* (*A. Karka*), which is used for matting.

HISTORY. The first attempt to realize any revenue from the forests appears to have been made in 1866, when Government leased out the right to levy dues on forest produce to the Port Canning Company at a yearly rental of Rs. 8,000. The lease was, however, resumed by Government in 1869, as it was found that the monopoly thus established resulted in considerable oppression and was contrary to the interests of the general public. Further efforts were made to bring the forest under management in 1872, when they were examined by Mr. Home, Deputy Conservator of Forests; and Dr. Schlich, then Conservator of Forests in Bengal, came to the conclusion that they were inexhaustible and that nothing more than purely fiscal measures was required.

In 1874 the Lieutenant-Governor, Sir Richard Temple, decided upon a more vigorous policy. Revised rules for the sale of waste lands had been issued in February of that year, but a question soon arose regarding leases of lands in the Sundarbans, as the sale rules were found to be inoperative, the terms of sale being such as to prevent purchasers from coming forward. Sir Richard Temple, having personally visited the Sundarbans and examined the physical character and natural products of this tract, considered its relation to the surrounding districts and to the country at large. He found himself unable to accept the view that it necessarily was, or should be, a public object to get the whole of the Sundarbans gradually reclaimed and brought under cultivation. In his opinion, the public interest might be supposed to lie in the very opposite direction as regards a very large part of this tract. "The Sundarbans", he wrote, "include not only a mass of *sundrī* trees of comparatively higher growth, but also masses of trees and shrubs of lower growth. The former are used for carpentry and timber work; the latter for fuel. The area of both is very considerable. The relation of the tract to the surrounding districts also is not to be lost sight of. The *sundrī* forests supply wood for boat-building to the 24-Parganas, to Jessore, to Backergunge, to Noākhāli, and to other districts, and also furnish wood for many purposes of domestic architecture."

At this time an experiment was being tried for employing *sundrī* timber in the manufacture of railway sleepers, while other

trees supplied firewood and fuel to Calcutta and to many other towns, the needs of which could hardly be supplied otherwise than by the Sundarbans. Thus, the country at large had the strongest interest in the Sundarbans being preserved as a source of timber, wood, and fuel for the use of southern Bengal, so that wholesale reclamation was not wanted there. It was felt that in some parts of this tract the substitution of rice-fields or jungle might be desirable; but in most parts the ground already bore produce which was more valuable to Bengal than rice. Sir Richard Temple accordingly wished to restrict reclamation until it could be established by adequate enquiry whether the Sundarbans could meet these wants and still afford room for reclamation. It was admitted that in every tract some portions must be cleared, in order to render the remainder accessible to man and available for his use; and in his opinion, whatever reclamation might be permitted or encouraged in the Sundarbans should be arranged solely with this view.

Already much of the Sundarbans had been reclaimed, and Sir Richard Temple thought that the time had come when the position should be reconsidered. Complaints were made to him in the Backergunge district that *sundri* logs of the best quality were more rarely seen in the market than formerly. There was not sufficient security against the best kind of *sundri* trees being cut down in the same reckless and wasteful manner as that which was known to have prevailed in many parts of India before the institution of the forest system. Holding these views, therefore, he considered that the public interests required that no new negotiations of any kind should be opened for disposing of unclaimed land in the Sundarbans till it was decided by what rules Government could best maintain the principle that reclamation must be subordinate to forest conservation. For this purpose a local investigation by a properly qualified officer was necessary, and the Conservator of Forests (Dr. Schlich) was accordingly deputed to proceed to the spot and make enquiries.* As the result of his investigations, Dr. Schlich came to the conclusion that the forests were being overworked and that steps should be taken to prevent the exhaustion of the *sundri*-producing tracts.

The Sundarbans Forest Division was accordingly constituted in 1874-75, 885 square miles being notified as reserved in that year, while 314 square miles were added in 1875-76, thus making a total area of 1,199 square miles. It was laid down that in the

* C. E. Buckland, *Bengal under the Lieutenant-Governors* (1901), Vol. II, pp. 613-14.

Bāgherhāt forests, which lie to the east of the Passur river, no *sundrī* tree of less than 3 feet 9 inches in girth at a height of 4½ feet from the ground might be cut, but no other restriction was imposed on the removal of any kind of produce. The collection of dues on all forest produce exported was initiated, and the establishment of revenue stations commenced, the rates in force being very liberal, one anna per maund being charged for *sundrī*, *pussur* and *amūr* timber, and half an anna per maund for *garān* timber and *sundrī* fuel. The system of management continued on these lines till the forests were visited by Mr. Dansy, Conservator of Forests, in 1891, when it became clear that the *sundrī* forests were being rapidly destroyed by excessive felling, and that the restriction placed on the cutting of *sundrī* in the Bāgherhāt forests had been ignored.

It was then decided to restrict the felling of *sundrī* to yearly coupes, of which each should contain one-tenth of the area of the real *sundrī*-bearing tracts, viz., the forests of the Bāgherhāt and Khulnā subdivisions; and in view of the extensive destruction of *sundrī* timber which had gone on, the minimum felling girth had to be reduced to 3 feet. A working plan on the above lines was drawn up in 1893 for 10 years; but owing to the inadequacy of the staff, the working of the plan became a dead letter, and before the cycle of 10 years had elapsed, fellings of undersized trees were being carried out all over the area. Besides this, damage, to an extent that defies description, was resulting from the felling of *sundrī* fuel and poles in the forests named above under permits issued for the forests lying further west.

On the expiry of this plan in 1903, a new system of management was initiated, by which the annual fellings were confined to one-fortieth of the Bāgherhāt and Khulnā forest area and were properly supervised, while no permits for *sundrī* were issued for the remainder of the forests. The result was an enormously decreased supply and a sharp fall in revenue accompanied by a rise in the market value of *sundrī*. Working is still proceeding on similar lines, and the introduction of the system of monopoly sales described below has resulted in a healthy competition, which it is hoped will restore the revenue to something like its former proportions. The rates at present in force are:—9 pies per maund for *sundrī* fuel, *amūr* and *garān* poles, 6 pies per maund for poles of other species and *garān* fuel, 3 pies per maund for fuel of other species and minor produce, Rs. 4 per maund for wax and Re. 1-8 for honey.

MANAGEMENT.

For administrative purposes the Division is grouped in three circles known as the Bāgherhāt, Khulnā and Sātkhirā circles.

Revenue stations have been established at all the principal points of egress from the Sundarbans, and purchasers proceed to the forests and take their requirements from any locality they choose, on payment of the prescribed royalties per maund of boat measurement. The latter are extremely low, as compared with the actual value of the produce, and rightly so when the difficulties attendant on work in a tidal forest are considered. Purchasers are, however, bound by law to return with their permits to a revenue station where their boat-loads are examined and checked. The only exception to the above rule is found in the procedure adopted for disposing of the annual allotment of *sundrī* timber and fuel, which is regulated by a systematic working plan. The export of *sundrī* is only permitted from a certain definite area every year, and under certain conditions of supervision and control. *Sundrī* fuel is supplied from thinnings in the younger pole forest, while the exploitation of the available *sundrī* timber in the coupe of the year is now provided for by improvement fellings, in which the large quantity of defective and damaged trees (to remove which no provision had been made in former years) is being utilized. All trees are selected and marked for felling under trained supervision and sold at competitive rates under what is known as the monopoly system.

The aim of this system is to fix automatically the actual value of any produce sold, and its working is as follows. For a division or area unit, royalty rates are fixed for the produce to be sold, based on what is likely to be received for similar produce if extracted from more inaccessible areas. Then, the produce or area to be sold is divided into lots, and the monopoly or sole privilege of working each lot is sold by auction, the monopoly price bid being over and above the royalty rates to be paid afterwards. In other words, the contractor pays the price he bids for the monopoly, plus the royalty rates on the actual quantity of timber, etc., removed. A consequence of this method is that the contractors by bidding one against the other naturally fix the proper market value of the product, and the owner, *i.e.*, the State, receives a higher value for the trees nearer the market than for those further away. Further, detailed arrangements are made for the control of forest produce in transit, in order that the royalty rates may be levied on all that is removed; and before trees can be sold, they have to be marked, thereby enforcing an important sylvicultural principle and check.

It is scarcely necessary to enlarge on the future benefit that will accrue to the forests under this system. One immediate result has been to curtail the supply considerably, and another has

been to throw the bulk of the trade in the valuable *sundrī* timber into the hands of Backergunge *mahājans*, who invariably outbid other competitors at the auctions.

It may be noted that, in addition to the revenue stations mentioned above, there are also some 10 patrol boats in charge of foresters, which patrol near the boundary between the various stations, in order to check illicit removals, which the local villagers cannot abstain from attempting from time to time. Such patrol work is supplemented by the tours undertaken by the Gazetted Officers of the Division, who inspect the work of both the station and patrol officers, and also do a considerable amount of patrolling in the more inaccessible parts of the forests.

The following table gives the salient statistics of the working of the forests during the 10 years 1895-96 to 1904-05 and also during 1906-07.

	Timber.	Fuel.	Minor produce.	Revenue.	Expenditure.	Surplus.
	Cubic feet.	Cubic feet.	Rs.	Rs.	Rs.	Rs.
Total ...	37,598,617	99,902,608	658,074	45,04,102	8,12,900	36,91,202
Average ...	3,759,861	9,990,260	65,807	4,50,410	81,290	3,69,120
1906-07	4,214,159	9,153,288	93,917	5,21,151	2,02,600	3,18,551

The Sundarbans forests supply year after year immense quantities of forest produce to Khulnā and the adjoining districts, especially the 24-Parganas, Jessore and Backergunge. Endless numbers of boats proceed throughout the year to the forests and return laden with timber, firewood, thatching materials, etc., to supply which there is scarcely any other source available. There are, it is true, 1,758 square miles of protected forests in the western part of the Sundarbans situated in the 24-Parganas district, but owing to its saline character this tract does not produce a large quantity of the best timber and fuel trees. There is also a private estate in the Sātkhirā subdivision, which partly supplies the wants of the neighbouring inhabitants, and alongside the forests lie the lands disforested from time to time and leased for cultivation, which in some cases still contain forest. With these exceptions, the forests have to meet the demand for forest produce throughout the Khulnā and Jessore districts, and in a lesser degree that of the Backergunge district. Calcutta is also a market for *golpātā*, fuel and *garān* posts, and in addition to these products, *sundrī* timber goes to Dumriā in the Khulnā district, to many places in the Backergunge district, to Telihāti in the Farīdpur

MARKETS.

district, and to Jessore. As bamboos do not grow well near the Sundarbans area, and nearly all available land is devoted to the cultivation of rice, there is a steady local demand for materials required for house-building and agricultural implements, while the dried fish industry also absorbs a quantity of firewood. *Sundrī* timber for boat-building is in great demand throughout the neighbouring districts; but latterly, owing to the curtailment of the supply, it is giving place to teak and, in a lesser degree, to *sāl* timber. It is believed that comparatively few boats are now built of *sundrī* in the Khulnā district, the bulk of the material available being bought up by wealthy *mahājans* of Backergunge, who in addition to purchasing for their own requirements, export this timber to Dacca and other districts to the north.

CHAPTER VI.

AGRICULTURE.

GENERALLY speaking, agriculture is carried on successfully in the settled tract to the north, but conditions are unfavourable to it in the south-western portion of this tract, viz., in parts of thāna Pāikgāchā in the Khulnā subdivision, and in thānas Asāsuni, Kālīganj and the southern portion of thāna Sātkhirā in the Sātkhirā subdivision. Elsewhere, the land is fertile and is renovated periodically by inundations of sweet water, which wash away salt and leave fresh silt deposits. GENERAL CONDITIONS.

In the northern portion of the Sātkhirā subdivision, where the country is comparatively high, the crops are not exposed to salt water inundations; but in other parts of the cultivated area they are liable to fail, as the salt water coming up from the sea through the channels in the Sundarbans is not always washed away by timely rainfall. In fact, in a year of abnormally short rainfall, the river water remains more or less salt, even during the monsoon season, with most prejudicial results to the winter rice, the staple crop of the district. Two things are essential for the successful cultivation of this crop—dams and embankments of adequate strength, and sufficient rainfall to sweeten the rivers at the end of June so that their water may be used for irrigation. Unfortunately, in some tracts, where embankments are most necessary, many of the zamīndārs are absentees and some are indifferent to the welfare of the tenants; the subordinate tenure-holders are small men and impoverished; and the cultivators themselves are improvident. Embankments have consequently been permitted to fall into disrepair, thus allowing salt water to percolate into the fields to the gradual deterioration of the soil.

For practical purposes, the lands of the district may be divided into four main classes:—(1) the high lands to the north lying along the banks of the rivers, (2) the northern low lands situated in the interior away from the banks of these rivers, (3) the lands adjoining the Sundarbans, which have been reclaimed within comparatively recent times, and (4) the unreclaimed Sundarbans. Tracts of fertility.

The riparian tract first mentioned contains old settled villages, gardens and pasture land. The main products are areca-nut, coconut, betel leaves, bamboos, mangoes, plantains, tamarind, turmeric, date juice and thatching straw; of these products the most valuable are areca-nut and coconut, from which the villagers derive a great part of their income. Vegetables are also grown in this tract, which is practically the only one in which market gardening is feasible.

The northern low lands situated in depressions between the rivers contain extensive areas of *bil* lands, large flat tracts on which hardly a single tree can be seen. These lands are mainly cultivated with rice and are also suitable for jute and oil-seeds. Those *bils* which are connected with the rivers by means of efficient channels contain the best land for many varieties of coarse paddy and jute, for the creeks bring down rich river silt and also drain away the water, but in many cases the surrounding rivers have had their banks raised by the deposit of silt, the *khāls* have ceased to be proper drainage channels, and the *bils* have become useless swamps. Where there is no proper drainage, the cultivators are obliged to wait till the fields dry up, and, in a year when the rains are early and copious, such lands remain under water for a very long time and are unfit for dry cultivation. Another difficulty in the way of successful cultivation of *āman* rice in these tracts is that many of the rivers have become brackish, and in a year of heavy rainfall they overflow their banks, break through the dams across the *khāls* or the embankments round the fields, and submerge and destroy the seedlings.

The third tract is intersected by innumerable rivers and *khāls*, the water of which is salt for a great part of the year. Many of the *khāls* are therefore dammed up during the summer months, and all communication with the larger rivers is cut off, in order to prevent the salt water getting to the fields, which have also to be protected by small embankments called *bheris*. The dams are opened out during the cold weather, when the crops are gathered in and the rise of the water is less. In this tract cultivation is spreading to the south, and land is being gradually reclaimed from the Sundarbans and also protected by *bheris*. The result is that at the time of flood tide, salt water from the sea, which used to inundate lands covered with jungle, now comes higher up, and mixes with the water of the rivers and *khāls*, which but for such admixture might remain fresh for a great part of the year. *Aman* rice is the chief staple product of this area, *āus* and *boro* rice and jute being grown only on

high lands, while other crops are cultivated in such small quantities as not to require any particular notice.

Further to the south lie the Sundarbans, in which reclamation is now in progress. The following account of the method of reclamation, and the difficulties attending it, is quoted with some condensation from Sir James Westland's Report:—"The clearing of Sundarban forest is a most arduous undertaking. The trees intertwine with each other to such an extent, that each supports and upholds the others. Some of the trees, too, are of immense size, one sort, the *jin* tree, spreading and sending down new stems, till it covers perhaps an acre of ground. Trees like these cannot be cut down and removed in bulk; they must be taken piecemeal, and the tree must be cut up into little pieces. But the trees are not the only difficulty, for there is a low and almost impenetrable brushwood, which covers the whole surface. This has simply to be hacked away bit by bit by any one who attempts to penetrate into the forest. And there is no small danger from wild beasts while all this is going on. Tigers are not unfrequent, and occasionally break out upon the defenceless forest-clearers, if the latter approach their lair too closely. Sometimes a tiger takes possession of a tract of land, and commits such fearful havoc, that he is left at peace in his domain. The depredations of some unusually fierce tiger, or of more than one such tiger, have often caused the retirement of some advanced colony of clearers, who have, through their fear, been compelled to abandon land, which only the labour of years has reclaimed from jungle. SUNDARBANS RECLAMATION.

"Supposing, however, that the Sundarban cultivator has got over these obstacles, and the equally formidable, although less prominent, difficulties entailed by a residence far from the haunts of men, his dangers are not yet past. Unless the greatest care is taken of the land so cleared, it will spring back into jungle and become as bad as ever. So great is the evil fertility of the soil, that reclaimed land neglected for a single year will present to the next year's cultivator a forest of reeds (*nal*). He may cut it and burn it down, but it will spring up again almost as thick as ever; and it takes about three eradications to expel this reed when once it has grown. The soil, too, must be cultivated for ten or twelve years before it loses this tendency to cover itself with reed-jungle. When a sufficient number of people are gathered on a new clearing, they tend, of course, to form a settlement, and to remain permanently where they are. But the furthest advanced parts of the cultivation, and some also of those which are not new or remote from old lands, are carried on upon

a different principle. A large number of husbandmen, who live and cultivate lands in the regularly settled districts to the north, have also lands in the Sundarbans, which they hold under different landlords.

Seasons of cultivation.

"The cultivating seasons in the Sundarbans are later than those further north, and the plan which is followed by these double cultivators is as follows:—The months of Chaitra, Baisākh and Jaistha, corresponding roughly to the English months of April, May and June, are spent in cultivation at home. The husbandman then, having prepared his home cultivation, embarks with his ploughs, oxen, and food, and proceeds to his *ābād* or Sundarban clearing. July, August and September are spent in ploughing and sowing and preparing the crops there, the peasant building a little shed as a dwelling for himself. The water gets high in August and September, but this is little impediment to cultivation. A considerable portion of the land under rice is situated below high water mark; but the planting is easy, for rice sown on higher lands is transplanted into these low lands when it is strong enough to bear the waters. After having sown and transplanted his Sundarban crop, the husbandman returns home, and these outposts of civilization are absolutely abandoned, —large extents of cultivated rice-fields without a trace of human habitation. By the middle of December, the home-cultivated rice has been cut and stored, and the peasant then returns to the Sundarbans, and reaps the crop on his clearing there. At this time of the year (January and February), reapers or *dāwāls* crowd to the Sundarbans, and are extensively employed for the harvesting. When the rice is cut and prepared for sale, the *bepāris* or dealers come round and buy it up, and the zamīndār also sends his agents round to collect the rents from the cultivators. The peasant having sold his grain, pays his rent, and brings the balance of his money back with him to his home.

"While a great deal of cultivation in the more remote parts of the Sundarbans follows this method, in the nearer tracts there are large settlements of husbandmen who dwell permanently near the land they have under cultivation. But it must be remembered that these tracts are after all sparsely inhabited and that many of the cultivators who dwell in them, besides having a holding near their own houses, have also another, eight or ten miles away, which they visit only occasionally when they have work to do. The great fertility of the land renders it easy for a husbandman, to keep large areas under cultivation; and thus, what with resident large cultivating husbandmen and non-resident husbandmen, the population in the Sundarban tracts is not at

all equal to what the amount of land under cultivation would lead one to expect.

"Another feature in the reclamation and cultivation of these Sundarban lands is the embankment of water inlets. It is a characteristic of deltaic formations that the banks of the rivers are higher than the lands further removed from them; and the whole of the Sundarbans may be looked on as an aggregation of basins, where the higher level of the sides prevents the water coming in to overflow the interior. Many of these basins are so formed, that, left to themselves, they would remain under flood, as they communicate with the surrounding channels by means of *khâls*, or small water-courses, which penetrate the bank; and a great part of reclamation work consists in keeping out the water, and thus bringing under cultivation the marsh land inside. This method of reclamation of low lands applies both to the Sundarbans proper and also to a remarkable line of depression which runs across the district immediately north of Khulnā. Part of these low lands has been, and part remains to be, drained and reclaimed by the method referred to. Embankments.

"In employing this method, all the inlets from the channels surrounding are embanked, and smaller channels called *poyāns* are opened round their ends. The inlets themselves are too big to be kept under control, but these *poyāns* can easily be so kept. This embanking is usually done in November, after the rivers have gone down. When the tide is low, the channels are opened, and the water from the inside drains off; when it is high, the channels are closed. Much land can be rendered culturable by this means, which would otherwise be marsh. But here also a single year's neglect may take away at one stroke all that has been gained by many years' labour. The effect of the rains and the freshets of each year is to partially destroy all the embankments that were used the previous year, and to flood the lands. The rice that has been sown has, however, attained sufficient hardihood to remain uninjured; and when the waters again go down, the harvest may be reaped. But unless the embankments are again renewed in November, the floods will not have ceased to cover the low lands by sowing time, the land will remain unsown, and jungle and marshy reed will take the place of the paddy."

A sufficient and well distributed rainfall is essential for the growth of the rice crop, the staple product of Khulnā. The soil in many parts is more or less impregnated with salt; and before seedlings can be grown and transplantation effected, the salt must be washed out. Consequently any deficiency of rainfall at these RAINFALL.

critical periods reduces the area under cultivation. At the same time, ample rain is required to keep the water of the rivers and *khāls* sweet, especially as the silting up of the rivers at their heads has caused them to remain salt for a much longer period than formerly.

As regards the quantity of rain required at different periods, heavy downpours in the month of Baisākh (April-May) seriously interfere with the growth of the seedlings of *boro dhān* or broadcast paddy. Moderate showers, however, are beneficial, and at the same time they facilitate the sowing of winter rice in nurseries. The month of Jaistha (May-June) should be dry, in order that the seedlings of the broadcast paddy may develop properly, but a slight fall is not looked upon as harmful. The fall must be copious in the months of Asārh (June-July) to allow transplanted paddy to be sown in the nurseries and to wash away the salt deposits in places subject to salt water inundations. Heavy rain is also required in the month of Srāban (July-August) for the development of the paddy seedlings in the nurseries, but it should come at intervals to enable weeding and transplantation to be carried on successfully. Absence of good rain in the months of Bhādra (August-September) and Aswin (September-October) is most injurious, as the paddy plants, deprived of moisture, wither just when they are coming to maturity. Moderate showers only are required in the month of Kārttik (October-November), when they do good both to the winter rice and the *rabi* crops; an excessive fall, however, is injurious to both. Rain in the month of Agrahāyan (November-December) seriously interferes with the reaping of the paddy, and at the same time causes great damage to the pulse crops, which are then flowering. Showers in the month of Māgh (December-January) are hailed by the cultivators with joy, for they enable the land to be ploughed easily and exposed to air and sunshine. The months of Phālgun (January-February) and Chaitra (February-March) should be rainless, so as to allow the fields to be benefitted by the heat of the sun, and to permit of paddy cultivation in the *jobe* lands which otherwise lie fallow in these months.

near

remembeils of the district may be broadly divided into 4 classes, that man*juāshiyā*, (2) *mātiāl*, (3) recent alluvion, and (4) *jobe*. holding ne sandy loam found chiefly on the banks of rivers and miles away, he higher ground in the Sātkhirā subdivision; it work to do. uitable for fruit trees, *pān* plantations, and the husbandman, toes and oil-seeds. *Mātiāl* is a clayey soil mainly what with residen The recent alluvial soil, formed by the silt husbandmen, the

brought down by the rivers, is composed of sand or of sandy loam. It is either a *char* thrown in the midst of a navigable river or an accretion to the main land. *Jobe* is soil formed of decomposed vegetable matter deposited in the marshes. When mixed with the silt brought down by any stream which may happen to flow into these marshes, it forms a sort of stiff black clay. Winter rice of the coarsest sort is the only crop grown on such lands.

PRINCIPAL CROPS.

The following table shews the normal acreage of the crops of Khulnā and their percentage on the normal net cropped area:—

Name of crop.	Normal acreage.	Percentage on normal net cropped area.	Name of crop.	Normal acreage.	Percentage on normal net cropped area.
Winter rice ...	656,300	83	Summer rice ...	83,800	11
Sugarcane ...	1,500	...	Gram ...	100	...
Total *Aghani* crops ...	657,800	84	Other *rabi* cereals and pulses	10,600	1
Autumn rice ...	43,000	5	Other *rabi* food-crops ...	2,000	...
Bhādoi cereals and pulses ...	1,000	...	Linseed ...	2,500	...
Other *bhādoi* food-crops. ...	4,700	1	Rape and mustard ...	48,000	6
Jute ...	37,300	5	*Til* (*rabi*)	6,200	1
Til (*bhādoi*) ..	1,100	...	Other oil-seeds...	5,000	1
Total *Bhādoi* crops ...	87,100	11	Tobacco ...	5,200	1
Forest ...	133,712	16·9	Other *rabi* non-food crops ...	11,700	1
Twice cropped area ...	193,200	25	Total *Rabi* crops ..	175,100	22
			Orchards and garden produce	59,400	8

Rice.

As elsewhere in Lower Bengal, rice forms the staple crop, and consists of three main classes, *āman*, *āus* and *boro*, of which *āman* is by far the most important.

Aman.

In the drier portion of the district to the north and north-west *āman* rice is cultivated on low land, where water lies from one foot to three feet deep in the rains. The preparation of the land begins in the middle of February or the beginning of March, the land being ploughed several times before sowing. In April or May, after the first fall of rain, seed is scattered broadcast in a nursery. When the seedlings make their appearance, another field is prepared for transplanting. By this time the rainy season has thoroughly set in, and the field is dammed up so as to retain water. It is then repeatedly ploughed until the water becames

worked into the soil, and the whole is reduced to thick mud. The young rice is then taken from the nursery, and transplanted in rows about nine inches apart. After this, the crop is left to mature, and is generally ready for harvesting in November or December. *Aman* rice is also occasionally sown broadcast in marshy lands.

In the Sundarbans, land suitable for nurseries are not, as a rule, available, and consequently *āman* rice is generally sown broadcast on the marshes. Sowing takes place in the early part of July, and the crop is ready for reaping in January, the soil easily retaining up till that time all the moisture necessary for the growth of the grain. The method of reaping, too, is different from that which prevails in the rest of the district; for as the straw is of absolutely no value in the Sundarbans, the crop is reaped by only cutting off the heads, and the straw is subsequently burnt down. The finest outturn of winter rice is obtained from the reclaimed portions of the Sundarbans, which are famous for the teeming harvests obtained from the rich virgin soil.

The principal varieties of *āman* rice grown in the district are (1) *bhuruā-jatā*, (2) *lakshmī-kājal*, (3) *durgā-bhog*, (4) *kārttik-sāl*, (5) *dalkachu*, (6) *jhingā-sāl*, (7) *kalamkātī*, (8) *komrā-jal*, (9) *kanakchur*, (10) *bānsmati*, (11) *kālāngi*, (12) *lokmayā*, (13) *kāminī-saru*, (14) *khīrkon*, (15) *hāti-kāni*. There is a list of about seventy other local names—and even this is not exhaustive—but the above are the principal kinds. It is difficult, however, for any one but an expert to define the distinctions between these different kinds of rice.

Aus. *Aus* rice is generally sown on high ground. The field is ploughed when the early rains set in, ten or twelve times over, till the soil is reduced nearly to dust, and the seed is sown broadcast in April or May. As soon as the young plants reach six inches in height, the land is harrowed in order to thin the crop and clear it of weeds. The crop is harvested in August or September, and a second crop of pulse or oil-seeds is generally taken off the land in the cold weather. The principal varieties of *āus* rice are as follow:—(1) *sūryamani*, (2) *kersai*, (3) *kāliā nayānaī*, (4) *begun bichi*, (5) *sītāhār*, (6) *khubni*, (7) *bānsphul*, (8) *gangā-jalī*, (9) *parāngī*, (10) *benī-bāchāl*, (11) *pānā-jhure*, (12) *ghī-sāl*, (13) *piprā-sāl*, (14) *karīm-sāl*, (15) *benā-phuli*, and (16) *kālāndi*.

Boro. *Boro* rice is sown on marshes which dry up in winter. The preparation of the land commences in the middle of November; sowing takes place ten days later; and reaping lasts from the middle of March till the middle of April. The land is

hardly ploughed at all. The seed is scattered broadcast in the marshes or *bils* as they dry up, and the young shoots are transplanted when about a month old. There is another kind of *boro* paddy called *āus boro*, which is sown broadcast during the months of April and May and reaped in August or September.

Uri dhān

Another description of rice known as *uri dhān* is indigenous in the deep-water marshes and is occasionally used as food by the Pods and other fishing and boating castes, who live and ply their avocation among the swamps.. The plant looks like a confused mass of creepers floating on the water, and shoots forth its ears of grain in every direction. A peculiarity of this rice is that the grain drops from the ear into the water when it attains maturity. To prevent this, the fishing castes take a great deal of trouble in binding the ears together before the paddy ripens. This rice grows plentifully in the marshes, and is at the disposal of any one who is disposed to gather it. Very little is collected, however, except by fishermen or boatmen, for the swamps are deep, and the crop hardly repays the labour of binding the ears and collecting the grain.

Other cereals and pulses.

Except rice there is no cereal of any great importance. Gram (*chholā*) is cultivated on high land, but in 1906-07 had an area of only 100 acres, while other food grains, including pulses, were grown on 11,600 acres. They are mainly cold weather crops, such as peas, *masurī*, *khesāri* and *kalāi*, sown in October and gathered in February or March, and are cultivated only on small patches of land.

Oil-seeds.

The largest area under any one crop except rice is returned by rape and mustard, with a normal area of 48,000 acres, while other oil-seeds, linseed, *til*, etc., account for an aggregate of 14,800 acres.

Jute.

The crop of greatest importance after rice is jute. Twenty years ago it was reported that there was very little jute cultivation in the district, but the area devoted to the crop has steadily expanded of late years and in 1906-07 was returned as 37,000 acres. The process of cultivation is as follows. The field is well ploughed two or three times after the first fall of rain in March or April, and allowed to remain for two months. This interval the cultivator employs in manuring the land with cow-dung, rich black soil collected from the bottom of tanks, ashes, and all manner of vegetable refuse. The land is again ploughed several tim[illegible]y, the clods well broken, and the seed sown broadcast. When the young plants are about six inches high, a harrow is drawn over the field to thin the plants where they are too thick, as well as to furrow the land in order to assi[illegible] he

absorption of moisture. When the plant is a foot high, the field is carefully weeded by hand, after which it receives no further attention until the cutting season in August or September. When the crop is cut, the leaves are stripped off and scattered over the ground to rot in as manure. The jute stalks are then bound together, and steeped in a pool or tank for ten to fourteen days, until decomposition sets in, and the fibre becomes fit for separation from the stem. This is generally done by hired labour. The jute-washer snaps the stem about two feet from the root, and pulls out the inner woody part from the portion thus broken. He then lays hold of the fibre, and by continued gentle pulling, gradually separates it from the wood which still remains in the upper part of the stalk, and also from the outer bark. It is then thoroughly dried in the sun, and bound up into bundles called *gānt;* and in this state it is sold to the dealers.

Tobacco and sugarcane. Among other crops may be mentioned tobacco, which is raised on 5,200 acres; two varieties are grown, known as *deshī* and *matihāri.* Sugarcane is grown mainly in the Morrellganj thāna and in small quantities elsewhere; the land is generally too low-lying to admit of its successful cultivation.

Date-palm cultivation. The land being unsuitable for the cultivation of sugarcane, sugar is usually obtained from the *khejur* or date-palm, which is grown extensively in the Sātkhirā subdivision, and more or less everywhere in the district where the soil is favourable to its growth. For a regular date plantation high ground is selected. The seeds are sown in June or July after the land has been ploughed three or four times, and the trees make their appearance in about five or six months. They receive very little attention for the first two or three years, but the plantation has to be kept perfectly free from undergrowth when the trees attain a height of about 2 feet; for this purpose the turf is ploughed up from time to time. They come to perfection in seven or eight years, when they are tapped, but their development depends on the soil, saltish land being most favourable for their growth. The trees are planted in groves or are scattered about singly or in groups both in the villages and among the fields, especially along their boundaries, where they form a conspicuous feature in the scenery. An account of the tapping and other processes in the manufacture of date sugar will be given in Chapter IX.

Betel-nut and cocoanut trees. The Khulnā and Bāgherhāt subdivisions are particularly rich in coconut and betel-nut palms; and there is a large export of betel-nuts and coconut oil. The mode of gathering betel-nuts is peculiar. They grow, as is well known, on the top

of long slim trees. The collector mounts one of these trees, and after he has thrown down what he plucks from it, he swings the tree backwards and forwards, till, receiving sufficient impulse, he throws himself like a monkey on to the next tree. A number of accidents, and occasional deaths, occur from the falls which the collectors get in this operation, when they fail to catch hold of the trees towards which they are swung. The trees are planted in groves or are scattered in the midst of other cultivation, and may be found in almost every village. They are especially numerous in the east of the district.

Coconut trees are also scattered about the district, rather than grown in groves; the fruit is collected in the rainy season. A fully ripe coconut is called a *jhunā*, and from its kernel several kinds of sweetmeats are made, such as *nārikel nāru*, *raskarā*, *chandrapuli*, etc. The nut is put to a variety of uses; ropes and mats are made from the husk; oil is extracted from the kernel and forms an important article of trade; the shell is made into the bowls of hookahs, cups, etc.; and the tree itself, when past bearing, is cut down, and the trunk hollowed into a canoe.

FRUITS AND GARDEN PRODUCE.

Besides the fruit-bearing trees mentioned above, mango trees are grown extensively in the north of the district, but the fruit is not of good quality. Plantains are also grown largely in the same tract, the three principal varieties being *martamān*, *chāmpā*, and *kānthāli*; the last named variety is considered to be the purest food, although inferior in flavour to the others. Among other fruits may be mentioned pine-apples and lemons, which are grown in small quantities near the banks of rivers in the north.

Conditions are, on the whole, unfavourable to market gardening, owing to the low-lying, water-logged soil and the attacks of insects, but vegetables are grown on a fairly large scale on the high land near river banks. The most common vegetables are *baigun* or brinjal (*Solanum melongena*), several varieties of sweet potatoes, pumpkins, cucumbers, onions, garlic and radishes. A variety of yam called *mānkachu* is cultivated extensively, and potatoes are grown to a small extent on patches of exceptionally high land in the north of the district. Among other garden produce may be mentioned turmeric, sown in June and gathered in January, and chillies, sown in June and gathered in January or February. *Pān* gardens, known as *baraj*, are also found in the high ground which forms about the banks of rivers and *khāls*. Potato cultivation is gradually becoming popular in consequence of the success attained in Saiyadpur Trust estate.

The neighbouring local zamīndārs are beginning to introduce the crop on their own estates, and arrangements have been made to demonstrate the comparative values of the best varieties at a small farm at Khulnā.

EXTENSION OF CULTIVATION. In the north of the district cultivation is being steadily extended, and the shallow *bils* and marshes, which form so marked a feature of this portion of the district, are being steadily converted into rice fields. In the south the Sundarbans contain an immense area of fertile land awaiting the axe and plough, but the jungle is being steadily pushed back. Every year more land is being brought under cultivation, and steady progress is being made in the settlement of cultivators on new clearings, which attract cultivators not only from other parts of the district, but also from Nadiā, Jessore, Farīdpur and elsewhere.

IMPROVEMENT OF METHODS. On the other hand, but little progress is noticeable in the improvement of methods of agriculture or in the introduction of new or better varieties of crops. This is attributed to the fact that many of the zamīndārs, who have the best opportunities of making such reforms, take little interest in the welfare of their tenants. The latter are thus left to work out all improvements by themselves, and for this they have neither the means nor the intelligence necessary. At the same time, they have been quick enough to see the possibilities of profit in jute cultivation, and the area under this crop has been very largely extended.

Of recent years, however, signs of a change for the better are noticeable, owing to the establishment of an annual exhibition at Khulnā. It includes a cattle show and an exhibition of agricultural produce, as well as of local arts and industries. Various kinds of paddy, cotton, potatoes, sugarcane and vegetables are exhibited, and improved agricultural implements are shown by the Agricultural Department. A District Agricultural Association has also been formed, which has shown much activity and has given a considerable impetus to the cultivation of potatoes, a cultivation which is practically new to the district; mangels have also been successfuly grown.

CATTLE. The district is not suited for the rearing of cattle, as the water of many of the rivers becomes highly charged with salt during certain seasons of the year, and the cattle have little else to drink but this salt water, while the vegetation produced by it is also injurious. Consequently, only such cattle are kept as are indispensably necessary for agriculture, and when these die off, they have to be replaced from other districts. No care is taken about breeding, pasturage is deficient, and the

cattle are consequently poor. Goats are bred in fairly large numbers, but not by people who make it their only or even their principal means of earning a livelihood, the general practice being for poor labourers or poor old women to keep a few goats to eke out their scanty means of subsistence. Very few sheep are bred in the district, pigs are kept only by the low caste of Kāorās, and horses are still rarer.

Pasturage. There is little real pasturage land in the district, and fodder is consequently scarce. Formerly, it is said, considerable areas were left untilled in every village and reserved for the grazing of the village cattle. Now, the pressure of the population on the soil has resulted in the pasture lands being brought wholly or partly under the plough, so that there in most villages there is not a sufficient area of pasturage provided for the cattle; while there are not a few villages where there is no pasture land at all and the cattle graze in the rice fields after the crop has been cut. The following are reported to be the principal grazing lands left. In the large village of Deāra in thāna Kalāroā, which is enclosed on three sides by the Kabadak river and is inhabited by upwards of 300 families of Goālās, there is a tract of land, about 2 square miles in area, which is free from cultivation and is reserved for pasture. There is a similar tract of land of about the same area on the east of the police station of Kalāroā, which is used by herdsmen of the Goālā caste for grazing purposes; and pasturage is also allowed on the open ground in front of the Khulnā Collectorate.

Veterinary assistance. A veterinary hospital with a dispensary was opened at Khulnā in 1905-06. Rinderpest occasionally breaks out in a severe epidemic form, as in 1903-04 and 1906-07, when 2,899 and 2,640 cattle respectively died from this cause alone.

CHAPTER VII.

NATURAL CALAMITIES.

FAMINES. KHULNA suffered in common with other parts of Bengal from the famine of 1769-70, traditions of which still linger among the people who refer to it as the *kātā manwantar*, *i.e.*, the famine of 10 seers, because paddy sold at the rate of a *kātā* (10 seers) per rupee. The famine of 1866 did not affect the district very seriously, but there was distress in the Sātkhirā subdivision, where rice was selling at 8 seers per rupee in the middle of June. This subdivision was then part of the 24-Parganas, and it is mentioned as one of the two localities in that district in which deaths were directly attributable to starvation. The distress appears to have been most acute in the Kalāroā thāna, where money and rice were distributed to the famishing, an average of 233 people being relieved daily during August at the relief depôts. In the famine of 1874 a portion of the Kālīganj thāna, lying south of the Kāukhāli and east of the dried-up bed of the river Jamunā, was affected. A relief kitchen was opened at Syāmnagar, and the road from Kālīganj to Nakipur was constructed, but the people tided over their difficulties without much outside assistance. The records of these early famines are very meagre, but they are sufficient to show that the greater portion of the district remained practically immune from famine. The only other famine which has visited the district was that of 1897, which was due to an unusual combination of adverse circumstances. The following account of this famine is condensed from the report by Mr. W. H. Vincent, I.C.S., then Collector of Khulnā.

FAMINE OF 1897. The famine of 1897 affected only a portion of the district, viz. thānas Kālīganj, Asāsuni, Māgurā and Sātkhirā in the Sātkhirā subdivision and thāna Pāikgāchā in the Khulnā subdivision, an area extending over 474 square miles and containing a population of 276,000. With the exception of 25 square miles in thāna Sātkhirā and 7 square miles in thāna Māgurā, which comprise comparatively high lands, the area which was affected consists of low flat country intersected by numerous tidal *khāls* and protected from inundation by small embankments called *bheris*

The soil is impregnated with salt and grows nothing but *āman* or winter rice, which will not thrive unless there is enough fresh water to wash salt out of the ground. The inhabitants of this tract are mostly illiterate and improvident; the zamīndārs are absentees and generally indifferent to the welfare of their tenants; while the subordinate tenure-holders are small men and impoverished. Embankments had been permitted to go out of repair, thus allowing salt water to percolate into the fields to the gradual deterioration of the soil, while in 1895 a storm-wave swept over the distressed tract leaving a deposit of saline matter, which the rainfall of 1896 was not sufficient to wash out. The latter was scanty and unseasonable, and the result was a failure of the winter rice crop.

There had been excellent crops in the years 1893-94 and 1894-95, the outturn of winter rice being 14 and 16 annas respectively. The rainfall of 1895-96 was deficient, and consequently all the lands were not cultivated; yet the people would have got a fair crop but for the cyclonic storm which visited the affected tracts on the 1st October 1895, and which by driving salt water into the fields destroyed the young plants. The result was that the outturn of the winter rice crop was only 10 annas, and when the year 1896-97 opened, the people were already in straitened circumstances.

After the 1st October 1895, when 9·92 inches of rain fell, there was scarcely any till April 1896, in which month only 2·26 inches were recorded. This continuous drought, lasting over 6 months, increased the saline matter both in the soil and in the river water. The rainfall in May was only 4·09 inches as against 6·28 inches, the normal rainfall for the month; and though 13·72 inches were received in June, this was not sufficient to undo the effect of the prolonged drought. In July the rainfall was 9·28 inches, but in August again it was scanty, being only 5·95i nches. Transplantation was consequently retarded, and lands recently sown dried up. When good showers fell in the beginning of September, transplantation was pushed on as vigorously as possible, but the season was now far advanced, and in many places no seedlings could be obtained. Lands sown so late required much moisture for the steady growth of the young plants, but during the whole of October and November no rain fell, and in the last week of December the fall was only 0·78 inch.

In ordinary years river water becomes fresh early in July, and remains fresh till the middle of November; but this year it was brackish till the middle of August, and again became brackish in the beginning of October. A plentiful fall of rain was

expected during the Pūjās, but no rain actually fell. The temperature rose higher and higher, and the hot winds during October rapidly dried the surface of the soil, and the moisture necessary for the growth of the young rice was absent.

The figures given above relate to rainfall recorded at Sātkhirā town, but much less rain actually fell in the distressed area. It was, moreover, unevenly distributed; and the result was that only in some low lands not in the immediate vicinity of salt-water *khāls* and rivers was the crop partially saved. In these circumstances, the average outturn of the great rice-producing tract bordering on the Sundarbans hardly came up to 2 annas. The failure of the staple crop, coupled with the fact that in the preceding year also crops had been short, reduced the people to extreme poverty and rendered relief measures urgently necessary in the beginning of January 1897. The portion of thāna Pāikgāchā lying on the left bank of the Kabadak was affected by the same causes.

The distress was most severe in north Asāsuni, south Asāsuni, and north Kālīganj, where 6 to 8 per cent. of the population had to be relieved, as the lands there are the least protected by *bheris* or embankments. It was less severe in south Kālīganj, Syāmnagar, and Nunnagar, where the lands are better protected, and here the proportion of people relieved varied from 3 to 6 per cent.; while in the Māgurā and Budhhātā circles, where the land is comparatively high, it did not exceed 3 per cent. In the east of thāna Pāikgāchā there was a fair crop, and there also less than 3 per cent. of the population had to be relieved.

When relief operations commenced in the beginning of January 1897, the area of the affected tract was 442 square miles, with a population of 262,000 souls. As the season advanced, distress deepened, and during the fortnight ending the 26th May 25 square miles in thāna Sātkhirā, with a population of 11,000 souls, and 7 square miles in thāna Māgurā with a population of 3,000 souls were added to the affected area. These latter areas comprise comparatively high lands, on which *rabi* crops are grown to some extent. Molasses (*gur*) are also manufactured from date juice, and the people were, therefore, able to bear the strain for a longer period.

The relief works consisted mainly of the excavation of tanks, the construction of new roads, and the repair of old ones. Some *bāndhs* were also erected, and metal was broken into *khoā* for metalling a portion of an important road, in order to attract, if possible, female labourers to the work, and to provide landless labourers with some kind of work during the rains, when

no other works were possible. But this metal breaking was of little use, for the women would not do the work, and the men got plenty of labour elsewhere in cultivation. When the rainy season commenced, the number of relief workers gradually decreased, owing to the fact that many had to attend cultivation, and partly also to the fact that suitable work could not be provided, as it had become impracticable to go on with earthwork. Many of the works had consequently to be stopped. When agricultural operations were in full swing, almost every one went away except a few who were labourers by profession. The relief works were finally closed during the week ending the 11th September 1897.

The number of relief workers gradually rose as more and more works were opened, and decreased as they had to be closed one after another. The ratio of relief workers to the population was 1 to 151, while the highest number was 5,878 during the week ending the 9th June. Gratuitous relief was commenced in the beginning of January with a daily average of 122 persons, and the numbers increased as the season advanced, reaching the maximum during the week ending 7th July, when 11,013 persons received this form of relief. When the rainy season set in and agricultural operations began, prices became easier and the number gradually decreased.

Relief from public funds was given in three ways, viz., (1) relief given to the people at their houses, (2) relief in poor-houses, and (3) relief to artisans. Able-bodied recipients of the first class had to husk paddy or twist jute in return for weekly doles. No work was exacted from the inmates of the poor-houses. The artisans were all weavers who were supplied with thread, and they returned the cloths woven by them, receiving as their wages the market value of the cloth minus the cost of the thread. Six poor-houses were opened at Kālīganj, Syāmnagar, Asāsuni, Nunnagar, Budhhātā and Pratāpnagar. The ratio to the population of the persons relieved in this way was 1 to 53, and the great majority of those relieved were women and children. It is contrary to custom in Khulnā for women, except Bunā women, to do earthwork or carry earth. In consequence, no women went to the relief works and many were in the greatest poverty and distress, and had either to be relieved in poor-houses or left to starve. The percentage on gratuitous relief was never high, and when the poor-houses opened, the way they flocked in was a test of the severity of the distress.

Altogether, the number receiving relief at any one time never exceeded 16,000, and the people showed more resource and

staying power than was anticipated when relief operations began. It was feared that Government would have to help about 8 per cent. of the population, but the number of the relief workers did not rise above 0·66 per cent., while that of recipients of gratuitous relief was not more than 1·86 per cent. throughout the period taken as a whole. The people suffered much, but did not resort to relief works, if they could possibly avoid it.

FLOODS. The northern portion of the district is liable to occasional floods, but the severity of such inundations is far less than it used to be about a century ago, when a large portion of the volume of the Ganges water poured down to the sea through the district. The Ganges now discharges its waters further to the east, and floods are consequently less frequent and less severe. Only a portion of the district is now liable to inundation from the overflowing of the rivers, and such inundations are in many ways beneficial owing to the rich deposit of silt that they leave.

In recent years the most serious floods have occurred in 1885, 1890 and 1900. The flood of 1885 was due to the bursting of an embankment along the Bhāgīrathī river near Berhampore in Murshidābād, and lasted from the 12th to the 18th September. It only affected a portion of the district, viz., the north and north-west of the Sātkhirā subdivision, where the rice in the low lands and swamps was destroyed and some of the cultivators' huts were demolished. The flood of 1890 was higher than that of 1885 and affected no less than 100 square miles in the Sātkhirā subdivision. This flood was caused by the overflow of the Jalangī and other channels connected with the Ganges, and was greatly aggravated by the bursting of the Bhāgīrathī embankment at the end of August. Owing to the silting up of the river channels, the flood water could not be drained off rapidly and subsided very late in the season. The rice crop consequently suffered severely, and the damage could not be remedied by fresh sowing and transplanting. Much misery was experienced during the inundation, but after the floods had subsided, the labourers got plenty of work, and no relief measures were necessary. The last serious flood occurred in September 1900, owing to the heavy rainfall of the 20th and 21st, when no less than 18·38 inches fell at Sātkhirā. All the low-lying villages in the subdivision were under water and a number of houses collapsed, while the loss of cattle was considerable. Great damage was caused to the winter crops, but fortunately no lives were lost.

CYCLONES. The district is exposed to the cyclones which sweep up from the Bay of Bengal, often accompanied by a destructive storm-wave. The colonies of settlers in the Sundarbans are specially

exposed to the fury of such storms. Their houses and their fields are only a foot or two above high water mark ; and when the cyclone wave pours up the great streams of the Passur and Haringhātā, and from them spreads over the country, the inundation works cruel havoc among the low-lying isolated villages. The grain in their fields is spoiled ; their houses are torn away and all their stores are lost ; their cattle are carried away and drowned ; and they themselves are reduced to extreme shifts to save their own lives. As an instance of the damage caused in this way may be mentioned the cyclone of the 16th May 1869, which destroyed 250 lives in Morrellganj alone, and caused an immense loss of property. In recent years the most serious cyclone was that of October 1895, which swept over both the Bāgherhāt and Sātkhirā subdivisions. In the former tract it did much damage to the betel-nuts, which form an important article of export, while in the latter tract the storm-wave which accompained it did great injury to the winter rice crop by destroying the young plants and by leaving a sterile deposit of saline matter.

CHAPTER VIII.

RENTS, WAGES AND PRICES.

RENTS. THE rates of rent paid by cultivators in Khulnā vary according to the position and quality of the land, and also according to the demand for it, *e.g.*, a *pān* or betel-leaf plantation would fetch a high rent in places containing settlements of Bāruis, whose hereditary occupation is the cultivation of this crop, but not elsewhere, while the Bāruis themselves would seldom think of emigrating to take up lands with a smaller rental. Generally speaking, too, in the tracts under reclamation, where the competition for land is not keen, no higher rates are paid for land bearing valuable crops than for land of the same quality under rice; and homestead sites and superior lands, *i.e.*, lands on which sugarcane and other rich crops are grown are assessed at the same rent as good rice lands.

The following are reported to be the average rates of rent for different varieties of land in each of the three subdivisions of the district. In the Khulnā subdivision the rent for *dhāni* land, *i.e.*, land suitable for rice, pulses, etc., averages Re. 1-8 to Rs. 3 per *bighā* (Rs. 4-8 to Rs. 9 per acre), and of *bāgāt* or garden land from Rs. 3 to Rs. 6 per *bighā* (Rs. 9 to Rs. 18 per acre), *pān* land being assessed at the same rates. In the Bāgherhāt subdivision *dhāni* land fetches from Re. 1 to Rs. 6 per *bighā* (Rs. 3 to Rs. 18 per acre) and *pān* and garden land from Rs. 2 to Rs. 3 per *bighā* (Rs. 6 to Rs. 9 per acre). In the Sātkhirā subdivision the rents paid for *dhāni* land vary from Re. 1 to Rs. 2-5-4 per *bighā* (Rs. 3 to Rs. 7 per acre), for *bāgāt* or garden land from Rs. 2-10-8 to Rs. 13-5-4 per *bighā* (Rs. 8 to Rs. 40 per acre), and for *pān* land from Rs. 2-5-4 to Rs. 13-5-4 per *bighā* (Rs. 7 to Rs. 40 per acre).

As regards the different classes of ryots, it is reported that the rate of rent paid by ryots and under-ryots varies from 2 annas to Rs. 15 per *bighā*, and that the average rate may be taken at Rs. 4 per *bighā*. In the Sundarbans tract, where there are special rates, the rent rates are reported to be 8 annas, 12 annas, and Re. 1

per *bighā*. Privileged rents are paid by some tenants, such as the original settlers, who cleared away the jungle, and their descendants. Tenants of this class are allowed to hold their land at quit-rents ; and similar concessions are allowed to tenure-holders and under-tenure-holders, and to their successors in interest, in consideration of the outlay incurred in clearing jungle, maintaining embankments, etc. Similarly, in the Sundarbans the *ābādkātidārs*, or original settlers who cleared the jungle, are allowed in some cases to hold their land without assessment or at a reduced rental ; and similar concessions are allowed to tenants who build and maintain embankments.

From enquiries made in 1895-96 it appears that the provisions of section 50 of the Tenancy Act, that, unless a landlord can prove that the rate of rent has been altered within the last 20 years, it shall be presumed to be permanently fixed, are constantly tending to convert the holding of an occupancy ryot into a permanent and hereditary tenure and a suitable investment for the moneyed classes. Accordingly, there is a tendency for the non-cultivating classes to buy up the rights of occupancy ryots and sublet the lands to under-ryots who actually cultivate them; and the middlemen, who buy up the rights of occupancy ryots, extort exorbitant rents from the actual cultivators. These enquiries also showed that the holder of a permanent holding directly under the proprietor pays rent varying from 10 annas to Rs. 2 per standard *bighā*, according to the class of land, and as the average annual value of the gross produce of a *bighā* of land is about Rs. 9, the rent paid represents about a sixth of the value of the gross produce. Under-ryots, however, pay either half the gross produce, or if they pay rent in cash, about a third of the value of the gross produce.

Produce rents.

A small minority of the cultivators in the north of the district still pay rents in kind, but this system is on the decline, the tendency being to commute produce rents to money rents. Rents in kind are, however, commonly paid by petty cultivators called *bargādārs* or *bargāits*, who pay half the produce of the land by way of rent. In the Sundarbans the system of produce rents is more common, for here a husbandman who has more land than he can manage himself either imports labour for its cultivation or sublets a portion. In the latter case he either leases it out in a regular way or lets it out on what is called the *bhāg* system because he receives a share (*bhāg*) of the produce as rent. This share is usually one-half, and the sub-tenant provides seed grain, plough and other necessary agricultural implements, while the lessor supplies the oxen for the plough.

WAGES. There has been little variation in the wages paid for labour during recent years, though on the whole there has been a steady and gradual rise. A mason earns 5 annas to Re. 1-4 a day, a carpenter 5 annas to Re. 1-2, and a blacksmith from 5 annas to 12 annas, the amount of their daily wages varying according to their skill. Skilled labour is scarce in the district; and to supply this want a technical school with carpentry and boat-building classes has recently been opened. Coolies or unskilled labourers receive a daily wage varying in the case of adults from 4 annas to 8 annas, as compared with 3½ to 5 annas 10 years ago; while women are paid 3 to 6 annas a day and boys 2 to 4 annas a day. The average daily wage of a common adult field labourer may be taken at 4 annas per diem, besides two meals, which would cost an additional 2 annas; but during the cultivating season the wages rise to 8 annas besides the two meals. Agricultural labourers are, however, commonly paid in kind, and it is a general custom for day labourers employed in cutting paddy to be paid by a share in the crop varying according to circumstances from one-third to one-eighth of the amount cut by them.

PRICES. The marginal table shews the average prices (in seers and chittacks per rupee) of the two staple food grains, rice and gram, and of salt during the last three years. The exceptionally high price of rice in the last year mentioned is due to the partial failure of the crop in this and other districts, but for many years past there has been a steady rise in the price.

Year.	Common rice.		Gram.		Salt.	
	S.	ch.	S.	ch.	S.	ch.
1904-05 ...	14	9	9	4	12	12
1905-06 ...	11	13	12	9	14	6
1906-07 ...	7	13	8	15	13	12

It is of some interest to compare the prices now prevailing with those which obtained in the affected tracts during the famine of 1897. In October 1896 the price of rice was 8½ to 9½ seers per rupee, and in November it was 8 seers per rupee; but in the second fortnight of December it went down to 10 seers, and this continued till the first fortnight of February 1897, owing to the fact that the paddy harvest had just been reaped. The fair outturn in the eastern part of the district also helped to keep down the price for some time, but it went up again, and rose higher and higher till the second fortnight of June, when rice sold at 6 seers 10 chittacks per rupee. The rainfall in July made the prospects brighter and prices became gradually easier, until in the first fortnight of September new *âus* rice

sold at 10 seers 8 chittacks per rupee. This was also the price of rice on the 30th September, when relief from Government funds was closed. It should be added, however, that Burma rice sold at a cheaper rate than country rice, the price being practically the same as in Calcutta plus a small charge for freight and profit. In June, July and the first part of August the price was 7½ to 8 seers; it then fell to 8½ seers, and came down to 9 seers per rupee towards the close of September.

MATERIAL CONDITION OF PEOPLE.

The people of Khulnā are on the whole fairly prosperous. The great majority are dependent on agriculture, living on the produce of their lands and gardens, and selling the surplus to purchase any small luxuries that they may require. The lands, as a rule, produce excellent harvests, especially of rice, and nearly every family has an orchard of coconut and betel-nut trees attached to the house. The sale of the nuts generally gives a ryot enough to pay his rent so that the rice grown in his fields is clear gain, and if the seasons are favourable, he can afford to save something annually. Many cultivators too have large clearances in the Sundarbans, which steadily yield rich crops and enable them to enjoy two harvests in the year. From March to May these peasants cultivate their home lands and then take their ploughs, cattle and labourers to the Sundarbans, where they spend the next three months in cultivating the land. When this is finished, they return home, to find their paddy ready for cutting; and after reaping it, they return again to the Sundarbans for the harvest there. The multitude of waterways also contribute greatly to their prosperity by rendering carriage easy and cheap, for the agricultural produce—rice, jute, betel-nuts, coconuts, whatever it may be—is put on a boat and conveyed to the market or, if need be, sent direct to Calcutta.

A significant indication of the comfortable circumstances enjoyed by the majority of the agricultural population is that, as a rule, they do not plough their lands or cut paddy themselves, but employ labourers imported from other districts. Even the small cultivator is in the habit of doing little or no work himself, but simply supervising his labourers; for he has plenty of rice, can catch fish in the tanks and rivers, and has coconuts, betel-nuts and other fruit in his *bāgān*, while there is little that he need buy except salt, clothes and tobacco.

On the other hand, the cultivators are liable to suffer periodical loss from the inclemency of the seasons, especially from an unfavourably distributed rainfall. If the rainfall is deficient, their paddy crops are short from want of moisture; if it is heavy, floods submerge the land and damage the rice plants. This

damage is all the greater because the district is intersected by rivers and *khāls*, the water of which is saline, especially in the Sundarbans. In this latter tract those cultivators whose villages are subject to annual inundation, are worse off than in other parts of Khulnā, for though embankments are erected to keep out flood water, these give way if not properly maintained. According to immemorial custom, the landlords are responsible for their maintenance, but the present generation of landlords in too many cases neglect this duty. Improvident habits also detract from the prosperity of the ryots. After the paddy harvest has been gathered the prudential maxims of economy are forgotten, and they often launch out extravagantly in the purchase of clothes and luxuries. Many are involved in debt, and the exorbitant rates of interest charged by the money-lenders leave them little chance of escape. It is hoped that a remedy for this state of affairs may be found in the cooperative credit societies now being established in increasing numbers.

The zamīndārs are generally absentees and frequently indifferent to the welfare of their tenants, leaving the management of their property largely to local agents, who are often ill-paid and not too scrupulous. On the other hand, the ryots are keen-witted and ready to assert their rights, real or supposed, in the courts of law. The *gānthidārs* are described as being impoverished, the rents collected from the tenants being often their only source of income, so that they are unable to bear the strain in years of bad harvests. Generally speaking, the small cultivators and landholders and the landless middle classes are not in comfortable circumstances; and the *bhadralok* with small fixed salaries, who are obliged by their position to keep up appearances, to dress well, and to give their children a good education, find it difficult to maintain their traditional style of living in years of high prices. Landless labourers fortunately are few, and are on the whole fairly well off, for there is a large demand for labour in the Sundarbans, to which crowds of *dāwāls* or reapers go in the harvesting season. There is, however, it is reported, another side to the picture. Although some, who have made their money by labour of this kind, add to it by judicious lending to their neighbours, there are others, and those the majority, who spend it in reckless expenditure on marriages and other social functions, and in litigation.

On the whole, the scale of living has risen in recent years. Visits to Calcutta, not only for business but also for pleasure, have become common since the opening of the railway, and the use of imported articles of food and clothing is reported to be general.

Even the cultivating classes have taken to wearing vests, comforters and woollen wrappers, while in the towns and in advanced villages, like Senhāti and Mulghar, the people indulge in luxuries such as tea and biscuits, which were formerly unknown.

CHAPTER IX.

OCCUPATIONS, MANUFACTURES AND TRADE.

OCCUPATIONS.

According to the statistics obtained at the census of 1901, altogether 967,000 persons or 77 per cent. of the population are supported by agriculture, and, of this number, 32 per cent. are actual workers, including 19,000 rent-receivers, 281,000 rent-payers, and 6,000 agricultural labourers. The next most numerous group consists of those supported by various industries, who number 147,000 and represent 11·7 per cent. of the population. Of these, 37 per cent. are actual workers and include 14,000 fishermen and fish dealers, 5,000 cotton weavers and 4,000 betel-leaf sellers, while goldsmiths, potters, dealers in timber and bamboos, and hide sellers are also numerous. The professional classes number 22,000, representing 1·8 per cent. of the population; and 36 per cent. of those classed under this head are actual workers, including 3,000 priests and 1,000 medical men. The number of those supported by commerce is very small, amounting only to 8,552 or 0·7 per cent. of the population, and of these, 33 per cent. are actual workers. Among those engaged in other occupations are 6,000 boatmen and 23,000 general labourers.

A noticeable feature of the returns is the comparative paucity of unproductive workers and non-workers. The vast majority of the people earn an honest livelihood by the sweat of their brow, and it is a matter of congratulation that, though the district does not contain many wealthy or advanced classes, it is free from a large number of unproductive workers or beggars. It may be added that, generally speaking, the women of the district are all domestic workers. They boil or dry and husk the paddy which their husbands grow, cook the meals of the family, wash the pots, pans and plates, look after the domestic cattle, and keep the homesteads neat and tidy. Most of the Hindu and some of the Muhammadan women also bring the water required for drinking and culinary purposes from the nearest river, *ghāt* or tank. But in ...hood of towns, and among those Muhammadans ...tensions to gentle birth, the zanāna system is ...men are not allowed to go out to bring

water. It is very rarely, indeed, that women go out to work in the fields or anywhere outside their own houses. In the town of Khulnā and a few other places, Bunā women, who are the descendants of immigrants from Burdwān and Bānkurā, go out to work; but few other women do so. When women are compelled to work for their own livelihood, they generally buy paddy, husk it in their own houses, and sell the rice; sometimes also they keep one or two cows or a few goats. A few women have shops of their own or are employed in shops, some become domestic servants, some are reduced to begging, and some either from want, or owing to vicious inclinations, lead a disreputable life.

MANUFACTURES.

In the early days of British administration, the principal industry of the district was the manufacture of salt, which was of sufficient importance to necessitate the employment of a considerable staff, with headquarters at Khulnā, and of a small military force. This industry has long since died out, and at present the industries of Khulnā are of little commercial importance, with the exception of those depending on the natural resources of the district, such as fisheries and forests. Generally speaking, the local artisans supply only the necessaries of life, *e.g.*, food and drink of the commonest description, coarse cloth, huts, boats roughly constructed, silver ornaments, earthen vessels, and badly made shoes and slippers. There are no large organized industries or manufactories except sugar refineries, in which, however, only primitive processes are employed.

In some parts of the Sātkhirā subdivision fine cotton cloth and good pottery used at one time to be manufactured to a certain extent, but these industries are decadent. Weaving is now almost entirely confined to the production of coarse cotton cloths by means of hand looms. These fabrics are said to be preferred by the poorer classes to machine-made goods on account of their durability, but even this handicraft is not flourishing. At present, the chief industry is the manufacture of sugar and molasses, but this again has been seriously affected by the competition of imported sugar. Of recent years an industrial and agricultural exhibition has been held annually at Khulnā, and it is hoped that this institution will help to develop the indigenous industries of the district. The following is a brief account of the most important industries.

Sugar manufacture.

Sugar is made by primitive methods from the juice of the *khejur* or date palm. The first process consists of tapping the tree, which begins when the tree is ripe and continues each year thereafter. When the rainy season is over, and there is no more fear of rain, the cultivator cuts off the leaves

growing out of the trunk for one half of its circumference, and thus leaves bare a surface measuring about 10 or 12 inches each way. This surface is at first a brilliant white, but becomes by exposure quite brown, and has the appearance of coarse matting. The leaves are cut off by a man who climbs up the tree supporting himself by a strong rope, which he passes round the tree and his own loins. He slides the rope up and down with his hands, setting his feet firmly against the tree, and throwing the weight of his body on the rope. In this manner his hands are free, and he cuts the tree with a sharp knife like a billhook.

After the tree has remained exposed a few days, the tapping is performed by making a cut into the exposed surface, in the shape of a broad V, and then cutting down the surface inside the angle thus formed. The sap exudes from this triangular surface, and runs down to the angle, where a thin bamboo is inserted, in order to catch the dropping sap and carry it out as by a spout. Below the end of the bamboo an earthenware pot is hung at sunset, and the juice of the tree runs down into it. In the morning, before sunrise, the pots are taken down, and are generally full. The juice is extracted three days in succession, and then the tree is allowed to rest six days, when the juice is again extracted for three days more.

The next process consists of boiling the juice, and this every ryot does for himself, usually within the limits of the palm grove. Without boiling, the juice speedily ferments and becomes useless; but when once boiled down, it may be kept for long periods. The juice is therefore boiled at once in large pots placed on a perforated dome, beneath which a strong fire is kept burning, the pared leaves of the trees being used with other fuel. The juice, which was at first brilliant and limpid, becomes now a dark brown half-viscid half-solid mass called *gur*, which is easily poured, when it is still warm, from the boiling pan into the *gharās* or earthenware pots in which it is ordinarily kept. It is then sold to refiners, and manufactured into sugar.

Daluā sugar.

Two kinds of sugar are produced, viz., *daluā* and *pākā*. *Daluā* sugar is the soft moist, non-granular, powdery sugar used chiefly for the manufacture of Indian sweetmeats. The process of manufacture is as follows. The pots of *gur* received by the refiner are broken up and the *gur* tumbled out into baskets. The surface is then beaten down so as to make it pretty level, and the baskets are placed over open pans. Left thus for eight days, the molasses passes through the basket, dropping into the open pan beneath, and leaving the more solid part of

the *gur*, viz., the sugar in the basket. *Gur* is, in fact, a mixture of sugar and molasses, and the object of the refining is to drive off the molasses, which gives a dark colour to the *gur*. This eight days' standing allows a great deal of the molasses to drop out, but not nearly enough; and to carry the process further, a river weed, called *seolā*, which grows freely in the Kabadak, is placed on the baskets so as to rest on the top of the sugar. The effect of this weed is to keep up a continual moisture; and the moisture, descending through the sugar, carries the molasses with it, leaving the sugar comparatively white and free from molasses. After eight days' exposure with *seolā* leaves, about four inches on the surface of the mass will be found purified. They are cut off, and the *seolā* is again placed on the newly exposed surface. This and one other application will be sufficient to purify the whole mass. The sugar thus collected is moist, and it is therefore put out to dry in the sun, being first chopped up so as to prevent it caking. When dry, it is a fair, lumpy, raw sugar, which weighs about 30 per cent. of the original mass, the rest of the *gur* having passed off in molasses.

The sugar produced by the method just described is called *doluā*—a soft yellowish sugar. It can never be clean, because it is clear, from the process used, that whatever impurity there may originally be in the *gur*, or whatever impurity may creep into the sugar during its somewhat rough process of manufacture, must always appear in the finished article. Another objection to it is that it tends slightly to liquefaction, and cannot therefore be kept for any considerable time.

Pākā sugar.

Pākā sugar is a much cleaner and more lasting article. To produce it, the *gur* is first cast upon flat platforms, and as much of the molasses as then flows off is collected as first droppings. The rest is collected, put into sacks and squeezed, and a great deal of the molasses is thus separated out. The sugar which remains behind is then boiled with water in large open pans, and as it boils, all scum is taken off. It is then strained and boiled a second time, and left to cool in flat basins. When cooled, it is already sugar of a rough sort, and now *seolā* leaves are put over it, and it is left to drop. The result is a good white sugar, and should any remain at the bottom of the vessels still unrefined, it is again treated with *seolā*. The first droppings, and the droppings under the *seolā* leaves, are collected, squeezed again in the sacks, and, from the sugar left behind, a second small quantity of refined sugar is prepared in exactly the same way by boiling. The droppings from the sacks are *chitā gur*, and are not used for

further sugar manufacture. About 30 per cent. of the original weight of the *gur* is turned out in the form of pure *pākā* sugar.

The primitive nature of the methods pursued will be readily understood by an inspection of a refinery. It generally consists of a large open square, shut in with a fence, and having sheds on one or two sides of it, where part of the work, and specially the storing, is done. If it is a refinery for the manufacture of *pākā* sugar, we will find several furnaces within the yard, with men busy at each, keeping up the fire, or skimming the pots, or preparing them. If *daluā* sugar is being made, we will see many rows of baskets with the sugar, covered with *seolā* leaves, standing to drop. Rows of earthen pots with *gur* or sugar or molasses, according to the stage of manufacture, are seen on all sides; and in the same open yard all the different processes are at the same time going on.

Fisheries. The fisheries of Khulnā are of considerable importance, affording a large number of persons a means of livelihood, even though they have not yet been properly developed. The following account of the industry is extracted mainly from the Report on the Enquiry into the Fisheries of Bengal, by Mr. K. G. Gupta, I.C.S., published in 1907.

Fishing takes place in the estuaries and larger channels only during the autumn and cold weather, *i.e*, from October to March, until the commencement of the strong south-west wind; but the busiest season is from November to February, when parties of fishermen venture out to the sea-face. During this period the fish keep fresh longer and can be sent to a fair distance; and most of the fish caught, especially the larger varieties, such as *bhekti*, are sent to Calcutta. In the smaller channels within easy reach of Calcutta fishing takes place throughout the year, and fish are often sent alive to Calcutta in bamboo crates. Generally speaking, the greater portion of the Sundarbans tract is neglected from the middle of March to the end of September, but further inland large quantities of prawns are caught, boiled and dried for the Burma market during these months.

The numerous waterways comprised in the Sundarbans constitute one of the most valuable estuarine fisheries in Bengal; but this immense source of fish supply has as yet barely been tapped. The number of fishermen employed is small, the boats are unseaworthy, and there is no arrangement for the quick despatch of their hauls from the fishing grounds. Much food or drinking water cannot be carried in the miserable boats now employed, and it is consequently impossible for the fishermen to proceed beyond a short distance from their homes and the clearings

made for cultivation. The result is that this great fishery is very imperfectly worked, whereas under more favourable conditions it could be made to supply not only Calcutta but other important markets with abundant fish in fresh condition, and also support a considerable business in preserved fish. As regards the inland fisheries, the silting up of the rivers at their heads and the reclamation of numerous *bils* have greatly affected the supply of fish for which the district was formerly famous.

The methods employed for catching fish are both numerous and ingenious. One favourite engine consists of a large bag net suspended on two long bamboos stuck out at one side of the boat. Sometimes the boat, with the net thus expanded under water, is driven slowly against the current. Sometimes otters are tied by a rope to the boat, and trained to plunge about on the sides of the net, so as to frighten fish into it. The fisherman then raises the net quickly by standing on the inside ends of the bamboos, and thus gets all the fish that may be in it. Another common method (rather applicable to marshes than to rivers) is as follows. On the surface of the swamps, large patches of weed called *dhāp* are formed, which, on the subsidence of the water, sometimes float out of the marshes, and so down stream. These patches the fishermen fix by placing stakes round their circumference, and then leave them for a day or two. The fish congregate beneath them, and the fishermen by drawing a net round the place and removing the weeds, catch them in large quantities. On the borders of shallow rivers, branches of trees are also placed in the water for the same purpose, viz., to attract fish to one place. On the muddy banks of tidal rivers, little branching twigs are placed to attract prawns, which cluster about the twigs in great numbers and are easily caught. **Methods of capture.**

The fishermen in the marshes often carry in their boats an instrument like a long broom, with spear-heads in place of bristles. When they pass a big fish, they dart this collection of prongs at it, and usually succeed in bringing it up impaled on one of its points. This, however, is not a regular, but only a supplemental, mode of fishing, for men do not go out to fish armed solely with this weapon. On narrow shelving banks a round net is sometimes used. The fisherman goes along the bank, watching till he sees a place where some fish are lying. He then throws his net in such a manner, that before touching the water it has spread out into a large circle. The edges of the net are heavily weighted with lead, and falling on all sides of the fish imprison them. Cage-fishing, by means of fixed cages of wicker-work, is also common. Every little

streamlet, and even the surface drainage of the fields and ditches, show arrays of these traps placed so as to capture fish. The same method is used, but on a larger scale, in shallow and sluggish rivers, where, in many cases, lines of wicker traps may be seen stretched across the river from bank to bank. Another plan for capturing fish is by attracting them at night by a bright light and trapping them.

The methods above described are used by single fishermen, or by a few men together. The fish, however, have sometimes to stand more formidable battues, when a party go out with nets or cages, and laying a large trap, drive into it many hundred fish at a time.

Fish preserving. The most usual modes of preserving fish are drying in the sun, artificial heating, and wet salting. Drying in the sun is the process most largely resorted to, especially with the smaller kinds. They are put out in the sun as caught, without any cleaning on mats or on the sand, and after three or four days are gathered up and placed in bags or open baskets for transport. The larger kinds are cut open and their entrails removed before drying. There is always a foul smell involved in this process, and the dried stuff does not keep for very long, especially in wet weather. In some cases the fish is not dried until all efforts to sell it fresh have failed, and putrefaction has set in.

Boiling and drying in the sun are methods employed only in the case of prawns intended for the Burma market, for which there are several depôts in Khulnā. The business was introduced some 25 years ago by a Muhammadan from Surāt, whose example was followed by others, and whose firm still heads the list. From March to September prawns are caught by fishermen in the numerous creeks and channels of the district, and by them sold fresh to the dealers, who have factories for boiling and drying them. The principal firm uses trolleys and heated chambers for the purpose, in which the drying is completed in two or three hours. The shells are separated by beating, and the inner stuff, which gets broken up into the shape of large peas, is packed in bags, in which it keeps for some time. In other cases the fishermen themselves do the boiling and drying and sell the prepared stuff to the dealers. This business brings a large amount of money into the district for distribution to the fishing population at a time when work is otherwise slack.

Wet salting is a method only employed for preserving *hilsā*. The fish are cut up into transverse slices and kept in earthen pots in brine, tamarind being sometimes used. The fish emits a nasty smell, and it takes an acquired taste to relish it.

Boats are largely used in the conveyance of fish, both fresh and dried, as well as alive, and a large part of the supply of Calcutta market is sent in this way from Khulnā and the adjacent districts. Live *bhekti* are put in crates, which are towed by boats and brought all the way from the furthest corners of Khulnā to Dhāpā on the Salt Lake, the journey occupying 3 to 7 days, but a portion of the cargo is always lost. This mode is resorted to more in the rains and hot weather, when dead fish cannot be sent fresh by rail. In the cold weather special fast carrier boats are employed by parties of Sundarbans fishermen to convey the catches to the nearest railway station. At other seasons, slow country boats are in use, but they are so slow as to be almost useless for conveying dead fish over any long distance. The absence of rapid means of conveyance is one of the reasons why the Sundarbans fisheries are not worked more than they are; and so long as this want is not supplied by the establishment of a service of suitable launches, provided with cold storage, no great improvement in the supply can be looked for.

Wood-cutting.

Another important industry consists of wood-cutting, for which there is ample scope in the Sundarbans. The regular wood-cutters live for the most part just north of the Sundarbans; and when the rains have ceased, their season begins. A body of them start in a country boat for the Sundarbans—far south and near the sea. Their craft is provisioned for four months or so, and during that time it remains anchored at the place which they choose as their headquarters. They themselves leave the boat every morning to go to their work, and return to it at night in the same manner as they would come back to their homes. A party usually consists of ten or fifteen men, some of whom are always Bhāwālīs or regular wood-cutters. During the four months they are absent, they cut the wood, rough-hew it, and bind it into rafts or load it on boats. Although generally four or five days' voyage from their villages, some of them from time to time go home to bring news of the party, or to report that one of them has been caught by a tiger or alligator.

These regular expeditions are undertaken chiefly for the purpose of procuring the larger kinds of wood, suitable for posts, boat-building, etc., but they, as well as the occasional wood-cutters, also fell quantities of smaller timber to be used as firewood. The occasional wood-cutters include a number of the cultivators living within the Sundarbans limits or just beyond them. If they have any spare time, as often happens,—for their fields do not employ them all the year round,—they take a

boat, go down to the Sundarbans forests, and there cut a cargo of wood, and bring it up. The demand for wood, and especially for firewood, is so great, that it offers ample inducement to cultivators, even when comparatively well off, to engage in the trade.

A great part of the wood thus brought up from the Sundarbans is *sundrī*, which will not float in its green state. It comes up either as beams, or in short pieces of four or five feet long, intended for firewood. The former are transported by being tied outside the boats, or are made up into rafts and floated up along with a mass of lighter wood. The smaller pieces are laden in boats.

Boat-building.

Boats being the chief means of locomotion all over the district, boat-building is an industry of some local importance. It is carried on at Khanji, Khulnā, Nawāpārā, Daulatpur, Deārā, Nunnagar, Gobindakathi, Basantpur, Debhātā, Srīpur, Srīrāmpur and Jhāudāngā. Of these centres of the industry Khanji is the most important, large cargo boats being built and repaired there. The principal classes of boats are (1) cargo boats, (2) *pānshis* or passenger boats, (3) ordinary *dingīs* of various size and shapes, and (4) *jeliā dingīs* or fishing boats, which are generally light, long boats made for speed. Formerly *sundrī* wood was largely used, as it could be had at a low price; but as that wood is now bought up by large dealers, teak, *sāl*, *jārul*, and iron-wood planks are imported from Calcutta. Iron-wood, being comparatively cheap and durable in salt water, is used for the bottom, teak for the sides, and *sāl* for the upper part and the cross beams. The timber is generally supplied by a *mahājan* or by the owner of the boat. The carpenters are paid according to the size of the boat, the usual rate being about Rs. 4 to Rs. 7 per square foot. Their daily wages vary from 8 to 12 annas per day.

Very simple accessories and implements are used, and some shady place beneath a tree is usually selected for the carpenter's work. A fair-sized cargo boat, *i.e.*, one of 600 to 1,000 maunds burden, is built in 4 to 6 months. The cost of such a boat is about Rs. 700, and its market value is about Rs. 800. Gener[illegible] the boats are let out on hire, except *dingīs*, which are [illegible]n for sale for Rs. 50 to Rs. 200; the *pānshis* or green boats are often sold for Rs. 200 to Rs. 400; while the large cargo boats sometimes fetch Rs. 1,500. The carpenters are generally Muhammadans or Namasūdras, but sometimes the cultivators build small *dingīs* themselves for their own use.

Other industries.

The manufacture of pottery, cutlery and articles of horn is a fairly important industry at Kālīganj and other places in the Sātkhirā subdivision, but the other industries of the distric[illegible]

are of little importance. Jewellery is made to a small extent, the characteristic jewellery of the district being the *māduli*, a gold ornament having the shape of two cones joined together at their bases and sometimes flattened at the two ends. Reeds are extensively used both for mat and basket weaving. They are gathered by the mat-makers, Naluās by caste, who make trips to the Sundarbans in the cold weather, returning with a large quantity of reeds, which they work up into mats at their own homes. These mats are sometimes woven of a very large size, and used in place of carpets; they are much better woven than the ordinary native-made article. Baskets are also largely manufactured of reeds; and little colonies of basket-weavers, as well as of mat-weavers, dwell just beyond the Sundarbans. During the cold weather they migrate to some place in the Sundarbans, and remain there weaving baskets, which meet with a ready sale, as they are required for the rice harvest. When the cold weather is over, they return to their villages with a large stock of reeds, and go on with the manufacture in their own houses.

The long leaf of the *Nipa fruticans*, locally called *golpātā*, which grows extensively in the Sundarbans, makes a useful thatching material for native huts, almost every one of which is roofed with this leaf. Honey and bees' wax are collected in the forest. Shells, gathered both on the banks of rivers and marshes, and on the sea-shore, are burnt down into lime. Khulnā is the principal place where lime-burning goes on. Lime made in this way is chiefly useful for plaster and was used in many old buildings. At the end of the 18th century large quantities of it were sent to Calcutta, to be employed in building or repairing Government House. The shells from which it is made are of two kinds—a long sort called *jomrā*, and a round sort called *jhinuk*. The ashes of the shell-lime, mixed with water, form the lime ash, or *chun*, which natives chew with *pān* leaf.

The exports of Khulnā consist mainly of its surplus crops **TRADE.** and the natural products of its forests and rivers. The export of fish is considerable, and Calcutta is dependent for a large part of its supply on this and the adjacent districts. Quantities of timber and firewood are exported from the Sundarbans, besides other jungle products, such as shells, honey, bees' wax, the thatching leaves called *golpātā*, canes and reeds. The agricultural exports consist mostly of rice, paddy and jute, besides a certain amount of gram and oil-seeds. The exports of rice bulk most largely, as the outturn is more than sufficient for local consumption. Betel-nuts and coconuts are also an important export. The

exports of manufactured articles are of little value, consisting almost entirely of molasses or sugar made from date juice and of coarse matting manufactured from the reeds found in the numerous *bils* and marshes.

A rural population such as that of Khulnā has but few wants, and the chief imports consist of articles of necessity, which either cannot be produced at all or cannot be produced cheaply in the district, such as raw cotton, cotton twist, cotton piece-goods, hardware, glassware, sugar (refined), shoes, kerosene oil, coal and coke, lime and tobacco.

Trading classes. The principal castes engaged in commerce are Kāyasths, Telis, Bāruis, Sāhās, Mālos, Baniks, Namasūdras and Muhammadans. Besides the regular merchants and shop-keepers of the towns and villages, there are a number of traders carrying on business in the Sundarbans. Some of them have large boats, with which they visit the clearings, andl oad up cargoes close to where the grain grows. Others, stationed at some village, buy up grain when they can get it, and ship it themselves or sell it to larger traders. And everywhere there will be found a class of traders called *fariās*, who insert themselves between the more petty sellers and the regular trader or *bepāri*, buying up in very small quantities, and when a certain bulk has been accumulated, waiting for the *bepāri* to come to buy, or taking the grain to him to sell it. In these ways the rice passes from the hand of the cultivator into that of the trader (*bepāri*) or merchant (*mahājan*). The trader is a man who has a capital, perhaps of Rs. 300 or Rs. 400. He sometimes exports his purchased rice himself, taking it to a merchant in Calcutta or elsewhere, who will buy it, and so give him money to use for a second similar transaction ; or he will sell it on the spot to the larger exporting merchants, men who have large firms in Calcutta and agencies in the producing districts.

Loan companies. At Khulnā there is a loan company known as the Khulnā Loan Company. The rate of interest charged by it varies from Rs. 9 to Rs. 18-12 per cent., in proportion to the amount and according to the value of the security offered in ornaments or landed property. It is reported that the rate of interest being high, only the zamīndārs and middle classes derive any advantage from the Company, and that while it is a great help to them, cultivators are unable to secure loans. Attempts are being made to establish Cooperative Credit Societies in as many villages as possible, to enable the latter to borrow money when required at reasonable rates. In 1905-06 only one such society had been started, but in 1907-08 altogether twenty-five were established, and the people are beginning to take a more active interest in them.

Trade centres.

The chief trade centres are:—in the Khulnā subdivision, Khulnā, Daulatpur, Phultalā, Alāipur, Kapilmuni, Chuknagar, Chālnā, Jalmā, Dumriā and Kutīrhāt; in the Bāgherhāt subdivision, Bāgherhāt, Fakīrhāt, Mansā, Jātrāpur, Kachuā, Chitalmāri, Gaurambha and Morrellganj; and in the Sātkhirā subdivision, Bardal, Pātkelghātā, Kālīganj, Kalāroā, Debhātā, Chānduriā, Basantpur, Asāsuni, Tālā and Nawābānki. The trade of Khulnā is carried on generally at permanent markets and *hāts*, *i.e.*, periodical markets held at different villages, to which the cultivators bring their rice for sale, and where they purchase in return their little home stores and necessaries.

Hāts.

A description of one of these market villages will apply to all, and the following account of one of them is extracted, with a few necessary modifications, from Sir James Westland's Report. If one were to see such a village on an ordinary day, one would see a few sleepy huts on the river bank, and pass it by as some insignificant village. The huts are many of them shops, and they are situated round a square; but there are no purchasers to be seen, and the square is deserted. The day before the *hāt* is held, however, large native craft come up from all directions, and anchor along the banks of the river and *khāl*, waiting for the market. Next day boats pour in from all directions laden with grain or conveying purchasers. People who trade in eatables bring their tobacco and turmeric to meet the demand of the thousand cultivators who have brought their rice to market, and who will take away with them a week's stores. The river and *khāl* become alive with native craft and boats, pushing in among each other, and literally covering the face of the water. Sales are going on rapidly amid all the hubbub, and the traders and merchants are filling their ships with the grain which the husbandmen have brought alongside and sold to them. The greater part of the traffic takes place on the water; but on land too it is a busy sight. On water or on land, there is probably a representative from nearly every house for miles round. They have come to sell their grain and to buy their stores; numberless hawkers have come to offer their stores for sale,—oil, turmeric, tobacco, vegetables, and all the other luxuries of a peasant's life. By the evening the business is done; the husbandmen turn their boats homewards; the hawkers go off to the next market village, or go to procure fresh supplies; and with the first favourable tide the boats weigh anchor, and take their cargoes away. Next morning the place is deserted for another week.

Trade routes.

The external trade of the district is carried on chiefly by means of the Eastern Bengal State Railway, steamers and ordinary

cargo boats. The internal trade is carried on chiefly by country boats plying along the Bhairab, Jamunā, Kānksiāli, Kālindī, Kabadak, Madhumatī, Athārabānkā, Rūpsā, Bhadrā, and Passur, and along the numerous rivers and creeks intersecting the district, most of which are navigable all the year round. There are two principal trade routes in this district. The first enters the district at Sachiadaha Hāt and proceeds *viâ* Alāipur to Khulnā, and thence to Baitāghātā. Here it divides into two channels, which meet at Bardal. The upper channel, which can be used by small country boats and launches but is often not navigable by steamers and large boats, proceeds *viâ* Surkhāli Hāt. The lower channel, which is used by small steamers and large country boats and is always open, proceeds *viâ* Chalnā Hāt. The former is part of the Inner Boat Route, and the latter of the Outer Boat Route. From Bardal the route goes on to Kālīganj, and leaves the district at Basantpur, from which it proceeds through the 24-Parganas to Calcutta. The trade of the Ganges, as well as that from Sirājganj, portions of Mymensingh, Dacca, Rangpur, and beyond, comes by this route. The second great route, known as the Steamer Route, comes from Barisāl, enters this district at Morrellganj, and passing through the uninhabited forests of the Sundarbans leads to Calcutta. This is used by large steamers, flats and timber boats, and is the great channel of trade from the Meghnā side of Dacca, Mymensingh and Tippera, Sylhet and Noākhāli.

CHAPTER X.

MEANS OF COMMUNICATION.

GENERAL CONDITIONS.

THE north of the district is tapped by the Eastern Bengal State Railway, which has a line running as far as Khulnā. The remainder of the district is almost entirely dependent on water communications, for the whole country is intersected by estuaries and water channels. The regular route of the river-borne trade from Calcutta to Eastern Bengal lies through the district, and it is well served by steamers. For internal communication country boats provide the principal means of transport, owing to the ramification of water channels, which enable boats to find their way to every village and almost to the door of every cottage. For the same reason roads are necessarily few in number and short in length, and being unmetalled—for in this fen country stone quarries and *kankar* beds are unknown—they are of little use during the rainy season.

Regarding the question of extending the means of communication, the following remarks, recorded by the District Magistrate in 1905, may be quoted :—" It has been a wonder to me at times that in places where cart traffic is limited, and boat journeys are generally resorted to for locomotion, there should be any road at all; but going to the interior I notice the great want of communication between villages situated at some distance from the river banks. I have also seen tow-paths made by Public Works funds and by some of the zamīndārs not sufficiently broad to permit of two persons walking abreast; and this has led me to think that in our future famine scheme we should convert these tow paths into river embankments sufficiently large to allow a cart to be driven, if not two. These will efficiently prevent the salt water from getting into the fields and villages, and also be a safer means of communication than boats when rivers are boisterous and small *dingīs* cannot ply. I am not in favour of metalling any more roads in this district. Those that we possess are sufficient, but in places where the soil becomes impassable in the rains, some parts may be metalled. If the railway line is extended to Sātkhirā, and then on to Khulnā or

Daulatpur *viā* Chuknagar, it will open out a part of the country which is liable to famine. I also hope that the railway may in time be extended to Bāgherhāt and then on to Morrellganj, when it will tap all the grain and jute traffic from Backergunge and bring them within easy reach of Calcutta."

WATER COMMUNICATIONS.

In any account of the waterways of Khulnā first place must be given to the system of navigable channels, known as the Calcutta and Eastern Canals, or sometimes as the Circular and Eastern Canals, which carry the produce of Eastern Bengal and the Brahmaputra Valley to Calcutta.

Calcutta and Eastern Canals.

The Calcutta and Eastern Canals run through this district and the 24-Parganas in Bengal, and through the districts of Farīdpur and Backergunge in Eastern Bengal. They have a total length of 1,127 miles, of which 47 miles are artificial canals or cuts connecting the tidal channels. The remainder are natural channels, mainly the tidal creeks and rivers of the Sundarbans, which stretch eastwards from the Hooghly across the Ganges delta. The channels are under the supervision and control of Government, and tolls are charged on vessels when they enter the Circular Canal at Dhāpā lock 5 miles east of the Hooghly.

This is one of the most important systems of inland navigation in the world, judging by the volume of the traffic, which averages a million tons per annum, valued at nearly four million sterling. The situation of Calcutta makes it the natural outlet for the Ganges valley, and this position has been enormously strengthened by the construction of railways; but other measures were necessary to enable it to tap the trade of the Brahmaputra valley and to focus the rich traffic of the eastern districts. The intermediate country is a maze of tidal creeks, for the most part running north and south, but connected here and there by cross-channels, wide near the sea-face but narrow and tortuous further inland. These inland channels are constantly shifting as the deposit of silt raises their beds, while on the other hand the great estuaries near the sea-face are not navigable by country boats from June to October, owing to the strong sea-breezes which prevail during the south-west monsoon.

This system of channels was devised, therefore, in orde to allow country boats to pass from the eastern districts Calcutta by a direct inland route, and the problem has been keep the natural cross-channels clear of silt, and to con them with each other and with Calcutta by a system of arti canals. The channels have been in use for many years, a is along them that the rice, jute and oil-seeds of Eastern Ben the tea of Assam and Cāchār, and the jungle produce of

Sundarbans pour into Calcutta, while they also carry the exports of salt, piece-goods and kerosene oil from Calcutta to these districts.

To the east the objective of the system is Barisāl, the head-quarters of the great rice-growing district of Backergunge, situated 187 miles east of Calcutta. There are three alternative routes to Barisāl known as the Inner Boat Route, the Outer Boat Route, and the Steamer Route. The Inner Boat Route, which is used by small country boats and launches, passes along the Bhāngar canal and Sibsā river to Khulnā, and thence by the Bhairab river to Pirojpur and Barisāl. The Outer Boat Route, which is used by small steamers and large country boats, follows Tolly's Nullah and the Bidyādharī river to Canning, and then strikes to the north-east. The channels it follows in this district will be seen in the map. The Steamer Route, which is used by large steamers and flats, follows the Hooghly river as far as the Bārātalā creek between Sāgar island and the mainland, and then turns east and north-east, working its way through various creeks and channels in the Sundarbans till it meets the two routes previously described at Pirojpur.

Included in this system is an important channel, known as the Mādārīpur *Bil* route, which in the rains forms a direct means of communication between the railway terminus at Khulnā and Mādārīpur and other jute centres. The Mādārīpur *Bil*, it may be explained, is a large inland depression, in the Farīdpur district, between the Kumār and Madhumatī rivers, and the channel through it shortens the journey between Khulnā and Mādārīpur by 89 miles. The improvement of this route, so as to make it navigable for jute-laden steamers and flats during the rains, was commenced in 1900, and has since been completed. The channel is now to be further deepened and widened, so as to make it navigable throughout the year.

Principal routes. The following is a description of the principal routes proceeding from east to west.

Proceeding from Barisāl, the Inner Boat Route follows the Madhumatī and then goes along the Bhairab, passing by Kachuā and Bāgherhāt, as far as Khulnā. From Khulnā the route follows the Rūpsā river to Baitāghātā, whence it passes by ...khāli to Deluti, and thence by the Sibsā river *viâ* Pāikgāchā ... Kabadak. It then goes on past Asāsuni to Kālīganj and ... to Basantpur, after which it follows the Jamunā as far as ...inābād, and eventually leads to Calcutta.

The Outer Boat Route branches off from the former at ...ghātā, and striking southward by the Kāzībacha follows a ...circular course along the Dhāki and Manās, till it rejoins

the Inner Boat Route near Chāndkhāli. It then leaves it again near Asāsuni, and follows the Kholpetuā, Galghasiā and Bānstalā but rejoins at the junction of the Bānstalā with the Kānksiāli *Khāl*. An alternative route strikes northwards from Asāsuni to Sātkhirā; and from Husainābād it pursues a northerly course along the Kālindī.

The Steamer Route enters this district at Morrellganj and then follows the Bāruikhāl as far as Jiudhāra. It passes Chāndpai a little further on, and then pursues a circuitous south-westerly course through the Sundarbans, leaving this district at its south-western corner.

Boat Routes.

To the north-west the chief boat route enters the district from Jessore, and after reaching the junction of the Kabadak with the Marichchāp river, proceeds by the latter as far as its junction with the Betnā and the Kholpetuā, where it divides into two channels. Large boats pass along the Kholpetuā, Galghasiā, Bānstalā and Kānksiāli channels to Kālīganj, while smaller boats enter the Sobnāli at its junction with the Kholpetuā and proceed to Kālīganj by the Guntiākhāli, Hābrā Gāng, Sītalkhāli, Jhapjhapiā and Kānksiāli. The route through the Sītalkhāli has been shortened since the opening of the Gobinda Kātā *Khāl*, and boats of all sizes now pass through it. From Kālīganj the route proceeds through the Jamunā as far as Basantpur, where it again divides forming an inner and an outer passage. The outer passage enters the 24-Parganas through the Kālindī river and the Sāhebkhāli and Barakuliā *Khāls*, while the inner passage proceeds by the Jamunā from Basantpur to Husainābād, where it enters a channel called the Husainābād *Khāl*.

Other routes branch off north, east and south from Khulnā. The chief northern route proceeds up the Athārabānkā, the Madhumatī and the Garāi into the Padmā or main channel of the Ganges, and carries the river trade of Northern Bengal during the season when the Nadiā rivers are closed. In recent years, the silting up of this route has led to its abandonment by steamers. The eastern route from Khulnā passes down the Bhairab and then by Barisāl through the Backergunge district to Dacca. The main southern route connects Khulnā with Morrellganj.

Besides the rivers, there are several improved natural channels, of which a list is given below:—(1) A small artificial creek, 3 miles long, leads from the Kabadak at a point 4 miles north of Chāndkhāli, to the Sibsā river, which comes up from Pāikgāchhe. This channel, which is navigable all the year round, is about miles long and was constructed some years ago to save the boat traffic of the eastern districts from having to make a long detour

northwards. It perpetuates the name of the Assistant Engineer who excavated it, for the village which sprung up at its western end is called Millettganj and the creek itself Millettganj *Khāl.* (2) The Kabadak is also connected with the Bānskhāli *Khāl* (one of the inner Sundarbans *khāls*) by the Kātā *Khāl*, by which a great bend of the river is avoided. This *khāl* was excavated by Bābu Prān Nāth Chaudhri, and is used by the sugar boats from Kotchāndpur, Jhingergāchā and Trimohini on the Kabadak in Jessore. But the rush of water at ebb tide is very great, and its navigation consequently requires care. (3) The Nayā Kātā *Khāl* leads from the Kumrakhāli to the Bairā *Bil.* It is 2 miles long and is navigable all the year round. (4) The Sātkhirā Kātā *Khāl* (6 miles long) connects the Bairā *Bil Khāls* and the Betnā river. Small boats passing up the Betnā Gāng to Calcutta and back use this *khāl* as a short cut; but it is silting up, and has become a receptacle for the filth and drainage of the villages along its banks. Its excavation would involve a large expenditure of money, and is said to be inadvisable, as it would soon silt up again, unless provided with locks at both ends. (5) The Dandia Kātā *Khāl*, (6 mile slong), connects the Kabadak and the Betnā river. It is navigable for its whole length only during the rains, and as far as Senergānti, a distance of 3 miles, for the rest of the year. (6) The Jogikhāli *Khāl* connects the Passur with Nawāpārā. (7) The Gobinda Kātā *Khāl* or Wazīrpur Kātā *Khāl* (3 miles long) joins the Kānksiāli with the Guntiākhāli; both these are navigable all the year round. Besides these *khāls*, two other *khāls* may be mentioned, viz., the Alāipur *Khāl*, which was re-excavated some years ago so as to open out communication with the eastern districts, and the Asāsuni *Khāl* in the Sātkhirā subdivision, three miles of which have been deepened recently so as to reopen the short route to Calcutta. All these *khāls* have to be cleared of silt periodically.

Steamer services. The district is served by several steamer services. The Khulnā-Nārāyanganj Daily Mail Service connects Khulnā with the districts of Backergunge, Farīdpur, Tippera and Dacca, while the Cāchār-Sundarbans Daily Despatch Service calling at Morrellganj plies through the Sundarbans to Barisāl, Chāndpur, Nārāyanganj and Assam. There used to be a daily feeder service between Khulnā, Bāgherhāt and Morrellganj, but this has been discontinued lately owing to the silting up of the Alāipur *Khāl* between Alāipur and Mānbhog. Khulnā is also connected by the Māgurā service with Māgurā in Jessore, and by the Boālmāri service with Boālmāri in Farīdpur. Other steamer

services run from Khulnā to Lohāgarā in Jessore, and from Kapilmuni, along the Kabadak, to Kotchāndpur in Jessore, tapping the railway at Jhingergāchā. Another line plying between Pirojpur and Nāzirpur touches at Kachuā, and in the rainy season a service is opened from Mādārīpur to Khulnā for jute traffic, passing along the Mādārīpur *Bil* route.

RAILWAYS. The central section of the Eastern Bengal State Railway connects Khulnā with Calcutta and the adjoining districts of Jessore, Nadiā and the 24-Parganas. The terminus is at Khulnā, and there are two other stations, Daulatpur and Phultalā, the length of the line in the district being about 13 miles. Proposals for extending the Bārāsat-Basīrhāt light railway to Sātkhirā are under consideration.

ROADS. The district roads maintained by the District Board have a length of 535·6 miles, of which 508 miles are unmetalled and 27·6 miles are metalled, and there are also a number of village roads, with an aggregate length of 928 miles, under its control. These roads are all contained in the north of the district, and a reference to the map will show that the southern portion of the district is entirely without this means of communication—and necessarily so, as it is cut up in all directions by water-channels, which afford a more convenient means of transport. The following is an account of the more important roads.

In the Khulnā subdivision the most important road is that from Khulnā to Rājghāt on the northern boundary of the district; this is the old road to Jessore, but its importance has much decreased since the opening of the railway, which follows nearly the same line. Its length within the district is 17 miles, of which 6½ miles are metalled. From Daulatpur on this road a long cross-country road, 33 miles long, has been made to Sātkhirā. Other important roads in this subdivision are the road from Khulnā to Bāgherhāt, 20 miles long, of which a little over half a mile near Bāgherhāt is metalled and the road from Tālā to Pāikgāchā, 14 miles long. The other roads are mainly feeders of those mentioned above.

In the Sātkhirā subdivision the principal road is that from Sātkhirā to Chānduriā, 22 miles long. This is an important trade route, as it connects the *hāts* of Kadamtalā, Kalāroā, Sonāberiā and Chānduriā, and is much used for the transport of sugar, which is exported by water from Chānduriā. A continuation of this road runs from Sātkhirā to Bhomrā, a distance of 9 miles, and finally goes to Calcutta *viā* Basīrhāt and Bārāsat; but the part of the road lying within this district is metalled. The only other roads calling for separate mention

in this part of the district are those from Alāipur to Debhātā (12 miles), from Kāliganj to Iswarīpur (12½ miles), and from Sātkhirā to Budhhātā (7½ miles).

In the Bāgherhāt subdivision the principal roads are the Khulnā-Bāgherhāt road already mentioned, which is continued to Bongong, and the road from Bāgherhāt to Rāmpāl (16 miles) with a continuation to Chāndpai, 4 miles further on. These two roads are connected by a cross-country road between Bāgherhāt and Rāmpāl. The majority of the roads in the subdivision are merely paths along the rivers and estuaries.

POSTAL COMMUNICATIONS. The district contains altogether 74 post offices and 478½ miles of postal communication. The number of postal articles delivered in 1906-07 was 2,879,396 including 1,564,888 post cards and 940,342 letters. The value of money orders issued in that year was Rs. 15,39,684, and of those paid Rs. 9,83,639. The total number of Savings Banks deposits was 7,042, the amount deposited being Rs. 5,64,614. There are five postal-telegraph offices situated at Khulnā, Bāgherhāt, Fakīrhāt, Morrellganj and Sātkhirā, from which 11,000 telegraphic messages were issued in 1906-07.

CHAPTER XI.

LAND REVENUE ADMINISTRATION.

REVENUE HISTORY.

Mughal rule.

DURING the period of Mughal rule the country appears to have been parcelled out among a few large zamīndārs. The most influential of these zamīndārs were the Rājās of Jessore or Chānchrā, the nucleus of whose estates consisted of *parganas* Saiyadpur, Amidpur, Mundāgāchā and Mallikpur, part of the territory wrested from Pratāpāditya. These *parganas* were granted to Bhabeswar Rai as a reward for his services in the war against that chief; and his descendants, especially Manohar Rai (1649—1705), extended the limits of the estate until it comprised nearly all the *parganas* now included in the district. It was finally divided into two portions by Sukh Deb Rai, who assigned a quarter share to his brother Syām Sundar Rai, on whose death without heirs it was resumed by the Nawāb and granted to a nobleman of his court named Salāh-ud-dīn Khān. This latter estate was composed principally of lands in *parganas* Saiyadpur and Sāhos and was known as the Saiyadpur zamīndāri. The three-quarters share which the Rājā of Jessore retained was called the Yusafpur estate, after the name of the principal *pargana* included in it. It extended over the whole country between the Bhairab and Passur rivers on the east almost up to the Ichhāmatī on the west, while its northern limit was the tract through which the high road ran from Calcutta to Dacca. The greater part of the district was included in these two estates, but there were also a few smaller properties not absorbed by them, which belonged to different families. The largest extended over *parganas* Hoglā and Belphuliā, while another was included in *pargana* Sultānpur-Kharariā. There were other smaller properties scattered over the district, but they were rather fragments of larger properties, which had been separated by purchase or grant, and not estates which had always had a separate existence.

There was this further distinction that the zamīndārs in possession had no share in the administration like the larger landholders. At the same time, the latter appear to have been rather

This account of the revenue history of the district has been compiled from Sir James Westland's *Report on the District of Jessore*.

contractors for land revenue than actual owners of landed estates paying revenue to Government. Thus, we find that Manohar Rai was given authority to collect and pay in the revenue of the smaller estates in his neighbourhood, and that he gradually acquired a large property by paying up arrears when the small zamīndārs defaulted and by engaging for its future payment. The same method of aggrandizement was followed by his son, so that apparently the revenue of the smaller estates was paid through the owners of the large zamīndāris, who could acquire them in case of default by paying up the arrears and engaging for the future.

EARLY BRITISH ADMINISTRATION.

When the *Dīwāni* of Bengal, which included the administration of civil justice as well as the collection of revenue, was conferred upon the East India Company in 1765, it was not at first considered advisable to entrust the immediate management of the latter to European officers, who had had no experience of its intricacies. But in 1769 Supervisors were appointed by Mr. Verelst with powers of supervision over the native officers employed in collecting the revenue and administering justice in different parts of the country; and in 1770 Councils, with superior authority, were established at Murshidābād and Patna. The Supervisors were instructed to obtain full information regarding the produce and capacity of the land, to give details not only of the revenue, but also of the cesses or other demands made from the cultivators, and to report on the regulation of commerce and the administration of justice. The information elicited by these enquiries showed that the internal government was in a state of profound disorder, and that the people were suffering great oppression. Nevertheless, seven years elapsed from the acquisition of the *Dīwāni* before the Government deemed itself competent to remedy these defects. It was not till 1772 that the Court of Directors resolved to "stand forth as *Dīwān*, and by the agency of the Company's servants to take upon themselves the entire care and management of the revenue." A Board of Revenue was accordingly appointed at Calcutta, the Supervisors were given the designation of Collectors, and a native officer styled *Dīwān*, who was chosen by the Board, was associated with each Collector in the control of revenue affairs. The European officers were recalled, however, in 1774, and native agents (*āmils*) appointed in their stead. It was not till 1786 that a European Collector was again appointed for each district, the first in Jessore being Mr. Henckell, who was vested with the united powers of Collector, Civil Judge and Magistrate.

The north of the district, in common with other districts of Bengal, was settled in the year 1772 for a term of five years, on the expiry of which yearly settlements were made with the zamīndārs till the Decennial Settlement of 1790. When the settlement of 1772 was made, it was based on the enquiries made by an officer named Mr. Lane, whom the Committee of Revenue had deputed to make an estimate of the zamīndārs' assets. No further enquiry was made, and when the task of making the yearly settlements devolved upon the Collector, he had few settled principles and little detailed information to help him. He not unnaturally made a rough calculation, and got the zamīndār to undertake to pay as much as he could be made to consent to. If no amicable settlement could be arrived at, the zamīndār was temporarily ousted, and the Collector tried by direct collections to realize the estimated revenue. The same course was adopted in case of arrears, and the defaulting zamīndār was also liable to be put into jail, the sale of estates for arrears being apparently an expedient which had not been thought of at the time. In one case at least the authorities followed the old Mughal plan, when the zamīndārs of the Sultānpur estate defaulted in payment of the demand. They were dispossessed, and the estate was transferred to one Kāsī Nāth Datta on his paying up the arrears and engaging to pay the revenue accruing in future.

The annual settlements of land revenue, based on such imperfect data, resulted in an increased assessment every year and operated very harshly upon the zamīndārs. Many were plunged in debt, and their embarrassment reacted on their tenants, from whom they squeezed as much as they could get. "The zamīndārs," writes Sir James Westland, "uncertain of to-morrow, and having little enough for to-day, fell back on the ryots and determined to get the utmost out of them; they were pinched in their turn, and progress of any sort was rendered impossible. No ryot would improve his land or extend his cultivation when he knew that the zamīndār would at once demand all the advantage that might accrue ; and no zamīndār would attempt improvement of his estate when he knew the certain result would be an increased demand, and an indeterminately increased demand, on the part of the Collector. The mutual distrust between Government, zamīndār and ryot—the natural consequence of an annual settlement system, especially where no principles were laid down as a basis to work upon—barred all progress, and remedy was loudly called for."

In 1790 the Decennial Settlement was carried out by Mr. Rocke, who had succeeded Mr. Henckell the year before, and

was declared permanent in 1793. This settlement, as is well known, was a great advance upon the previous system, and involved a great deal more than a mere settlement of the revenue to be paid by zamīndārs. Hitherto, at each settlement the assets of the estate had been estimated; and the zamīndār retained the produce of his rent-free lands, together with a suitable but not accurately defined allowance, and handed over the remainder to the Government. A fixed demand was now settled, and at the same time the zamīndārs were bound in their turn to make a similar settlement with their ryots, so that the profits from extension of cultivation and from the settlement of new ryots would be enjoyed by the zamīndār, while the profits from the improvement of each ryot's holding would be obtained by the ryot himself. PERMANENT SETTLEMENT.

Another important change of system consisted in the separation of dependent *tālukdārs*. These were a class of minor zamīndārs created by, and paying their revenue through, the regular zamīndārs. The *tāluks* were of two classes, *pāttāi*, *i.e.*, founded upon a lease or *pāttā*, and *kharidā*, *i.e.*, purchased. In either case they had been created by the zamīndār, who, in return for an adequate consideration, made over to the *tālukdār* almost his entire rights in a small portion of his estate, subject to the payment of an annual rent. In this way zamīndārs anxious to realize money had granted away large portions of their estates either rent-free or on quit-rent tenures. Government now ordered that these grants should be separated from the parent estate, *i.e.*, instead of paying their revenue to the zamīndār, the *tālukdārs* should pay it direct to Government. They were thus placed on the footing of other zamīndārs, but those who were bound by their engagements to pay revenue through the zamīndārs only, were held not to be entitled to separation. Another change effected at the same time was the abolition of *sair* dues, *i.e.*, duties levied at *hāts* or markets upon goods brought for sale.

Apart from these and a few other circumstances, the basis of the settlement was the settlement of the previous year or the Collector's calculations, which were accepted for all but the largest estates, in respect of which the Board went into details, and somewhat modified his estimate. That the terms were not very favourable to the zamīndārs, will be seen from the figures showing the settlements of the largest estates, Yusafpur being settled at Rs. 3,02,372 or about Rs. 5,000 more than the demand of the previous year, while the Saiyadpur estate was made to pay Rs. 90,583 or Rs. 2,000 more than the previous year. Some of

the zamīndārs, the zamīndār of Yusafpur particularly, fought hard for a modification of the terms proposed, but finally had to accept them. In the end, most of the great zamīndār families were ruined and lost their estates owing to several causes. The assessment was too high, and the entire assets could not be realized, as the ryots were too strong and the law too weak for the zamīndārs. While the law insisted upon the immediate payment of the full amount demanded from the latter, it placed in their hands the most insufficient means of collecting their dues. For, if any ryot failed to pay his rent, they had to go through the dilatory, expensive, and by no means certain process of suing him in court and executing a decree against him—if the ryot had not meantime taken advantage of the delay and absconded. Lastly, the Permanent Settlement, by declaring estates to be the zamīndārs' property, but transferable by sale, had facilitated their transference to creditors. The zamīndārs before the settlement were many of them in debt, and now some at least had to part with their lands to meet their creditors' demands.

The general result may be gathered from the fact that, according to a report made by the Collector in 1800, no less than 1,000 estates were in arrears. Among the zamīndārs who were ruined was the largest landholder in the district, Rājā Srīkānta Rai of Yusafpur, who lost one by one the *parganas* making up his estate and was reduced to beggary. The proprietors of other estates were no more fortunate. *Pargana* Hoglā was sold up in 1796, and *pargana* Belphuliā was several times put up to sale. Of all the large zamīndāris in the district only two appear to have withstood the ordeal of the first ten years after the Permanent Settlement, viz., the Saiyadpur estate, now known as the Trust Estate, and Sultānpur, which had been acquired by Kāsī Nāth Datta in the manner already mentioned. The necessity of finding a remedy for this state of affairs at length pressed itself upon the attention of Government; and by Regulation VII of 1799 the zamīndārs were given greater facilities for realizing rents from the ryots. But this measure was carried only after many zamīndārs had been ruined.

RESUMPTION PROCEEDINGS. The most important event in the subsequent revenue history of the district was the resumption of estates. At the time of the Permanent Settlement large areas were claimed as revenue-free (*lākhirāj*), and the authority to scrutinize such revenue-free grants, and if invalid, to annex them, was specially reserved. The grants were divided into two classes—*bādshāhī* and *hukumī*, the former being those that were granted by the Mughal Emperor direct, and the latter by the officials of the Emperor. Regulation

XXXVII of 1793 dealt with *bādshāhī* grants, and Regulation XIX of the same year with the others. *Bādshāhī* grants were recognized as valid (*bāhālī*), if the holder could prove his *sanad* was hereditary and was in possession. *Hukumī* grants, though in their nature invalid, were accepted as valid if dated prior to 1765. All grants of a subsequent date were invalid and were resumed (*bāziāfti*), but those given between 1765 and 1790 were accorded a privileged rate of assessment. By Regulation XIX all revenue-free grants made by zamīndārs after 1790 were invalidated, and zamīndārs were authorized to nullify their own grants.

No practical steps were taken to give effect to these Regulations when they were passed, but in 1800 an attempt was made to introduce compulsory registration of *lākhirāj* grants. It proved abortive, and by Regulation II of 1819, the power of resumption was transferred from the Civil to the Revenue Courts. That Regulation was supplemented by Regulation III of 1828, which appointed an executive agency, in the person of a special Commissioner, to give practical effect to the policy of Government. Under his supervision, resumption proceedings were systematically undertaken between the years 1830 and 1850. By these means a large number of estates were added to the revenue-roll.

SUNDARBANS ADMINISTRATION.

The history of the revenue administration of the Sundarbans requires separate treatment, as it is entirely different from that of the rest of the district. A sketch of the measures taken in the early part of the 19th century has been given in Chapter II, from which it will be seen that in 1828 Government asserted its exclusive right to this tract, and followed up this declaration by the survey of Lieutenant Hodges. Some years before, in 1822-23, Mr. Prinsep had divided all the land between the river Jamunā and the Hooghly into blocks, which he numbered. Hodges similarly divided all the forest as far as the river Passur into blocks, but revised the numbering, so as to reduce the whole of his and Prinsep's blocks into a series numbered from 1 to 236. The aggregate area of these 236 "Sundarban lots" was computed at 1,702,420 acres or 2,660 square miles. The forest line having been authoritatively determined, it became necessary to deal with the lands which had been already reclaimed and were held free of land revenue, *i.e.*, to resume

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This account of the early revenue administration of the Sundarbans has been prepared from an article by Mr. Pargiter's *Cameos of Indian Districts—The Sundarbans*, Calcutta Review, 1889.

and settle them. Extensive tracts were recovered by Government, and as fast as each estate was resumed, it was brought under settlement.

In 1830 rules for the grant of the forest area were issued, and land was eagerly taken up. Applications poured in, mostly from Europeans resident in Calcutta, who had sanguine expectations of successful exploitation. Their anticipations were not unreasonable, for with the exception of some lands reserved for the Salt Department, applicants practically got gratis whatever they asked for in the 24-Parganas and Khulnā. During the two years 1830 and 1831, 98 lots were granted away, and twelve more during the next 5 years, the total area of the grants being 551,520 acres. The grants were made in perpetuity at a rental of about Re. 1-8 per acre, and nothing was payable during the first 20 years; but it was prescribed that one-fourth of the area should be rendered fit for cultivation within 5 years, under pain of the grant being forfeited to Government. This condition was laid down to ensure that the grantees should carry out the work of reclamation, for which they had received the land. No regular grants could be made in the eastern part of the Sundarbans, for no detailed survey had yet been made of the forest lands there.

Though such a large area had been settled, a considerable portion was never brought under cultivation, and consequently lapsed to Government. Some of the persons who got grants were mere speculators; they did not attempt to clear their lands, but realized whatever profit they could get from the wood and other natural products; and they sold the lots as soon as they could find a purchaser, so that having acquired the grants free of cost, they made a profitable speculation. In a few cases the grantees complied at once with the condition requiring clearance, but in rather more than one-third of the lots the difficulties and losses experienced proved insuperable to the grantees, who in consequence virtually gave up the undertaking, so that the Government was obliged to cancel their grants. In fact, few grantees were able to succeed who had not ample capital at their command. The work of reclamation required unceasing care and vigilance, for desertion among the ryots left the lands fallow and unremunerative, till fresh ryots could be engaged at heavy expense; and if the embankment chanced to be breached, salt water poured in and ruined the soil with a deposit of salt. The first allotment moreover was, in a measure, a matter of luck, for as each lot was given to the first applicant, the best lots were taken up by the earliest applicants. Until some progress was

made in the lots bordering on the cultivated tracts, it was almost hopeless for a grantee, whose land lay deeper in the forest, to succeed in his undertaking, however great his capital might be.

In these circumstances, the grantees petitioned Government for more liberal terms, and it was at last realized that the grant rules of 1830 were not a success. They were accordingly modified and were re-published in September 1853. Grants were to be made for 99 years, and were sold to the highest bidder if there was competition. The revenue assessed on them was reduced to about 6 annas per acre; and even this full rate (low as it was) did not become payable till the 51st year, after a long and very gradual enhancement commencing from the 21st year. But reclamation was more carefully provided for, and the grantee was required to have one-eighth of his grant fit for cultivation in 5 years, one-fourth in 10 years, one-half in 20 years, and practically the whole in 30 years, under pain of forfeiture. The earlier grantees were allowed the option of giving up their old leases and taking fresh leases under the new rules. This concession was highly appreciated, and about seventy of the earlier grantees accepted it and commuted their leases. The new rules gave a fresh stimulus to the reclamation of the Sundarbans, and there was no difficulty in granting out lands, for surveyors had been employed continuously from the year 1840, and had made partial surveys of all the accessible lands; besides which, all such lands in Khulnā and Backergunge were surveyed and mapped out in the course of the revenue survey during the years 1857 to 1863. Altogether, 157,990 acres are now held under the rules of 1853. Rules of 1853.

The rules of 1853 were virtually superseded by several sets of sale rules issued after 1862, but as the latter proved inoperative, a revised set of lease rules was published in 1879. Under those rules the grants made are of two classes, viz., (1) blocks of 200 acres or more leased to large capitalists who are prepared to spend time and money in developing them; and (2) plots not exceeding 200 acres leased to small capitalists for clearance by cultivators.

The "large capitalist rules" differ from the rules of 1853 in providing a rent-free period of only ten years, and in laying down only one clearance condition, viz., that one-eighth of the entire grant shall be rendered fit for cultivation at the end of the 5th year. This condition may be enforced either by forfeiture of the grant or by the issue of a fresh lease, omitting the remainder of the rent-free period, and requiring payment of rent at enhanced rates during the term of the grant. The rules also provide for gradually increasing rates of assessment after Large capitalist rules.

the expiration of the rent-free period, and varying rates within different tracts according to the rent-paying capabilities of the land. It is further provided that there shall be constantly recurring renewals of the lease on resettlement. The term of the original lease is fixed at 40 years, and resettlements are to be made after periods of 30 years, maximum rates being laid down for each resettlement. The maximum area of a grant is restricted to 5,000 *bighās*, the minimum being 200 *bighās*. Cultivation must not be scattered all over the area of the land, but proceed regularly through the blocks. Leases are to be sold at an upset price of Re. 1 an acre, when there is only one applicant, and to the highest bidder, when there are more than one. The leases confer an occupancy right, hereditary and transferable. Rights of way and water and other easements are reserved. The right of using all navigable streams and towpaths not less than 25 feet wide on each side of every such stream is also reserved to the public; while Government reserves to itself the right to all minerals in the land, together with rights of way and other reasonable facilities for working, getting at, and carrying away such minerals. No charge is made for timber on the land at the time it is leased, nor for any that may be cut or burnt to effect clearances or that may be used on the land; but a duty is levied on any exported for sale.

Small capitalist rules.

Under "the small capitalist rules" plots of land below 200 *bighās* are given to small settlers, guaranteeing them a formal lease for 30 years, if the lands are brought under cultivation within two years. The 30 years' lease allows a rent-free term of two years, with progressive rates of rent on the cultivated area, fixed with reference to rates paid in the neighbourhood by ryots to landholders for similar lands. If available, an area of unreclaimed land equal to the cultivated area is included in the lease, and in addition, the lessee can bring under cultivation any quantity of land adjoining his holding which he may find *bonâ fide* unoccupied. The holding is liable to measurement every five years, and all cultivated land in excess of the area originally assessed can be assessed at the same rate. After 30 years, renewed leases can be given for 30 years' periods, and rates of assessment can be adjusted at each renewal with reference to rates then prevailing in the neighbourhood. The tenure is heritable and transferable, provided that notice of transfer is given within one month, and no holding is to be divided without permission. No charge is made for wood and timber on the grant, nor for any cut or burnt in making clearances, or used on the land; but a duty is levied on any exported for sale.

Experience has shown that the system followed has not been a success, and it has been condemned on the ground that it caused a heavy loss of revenue, afforded no adequate control over the landlords, and encouraged a system of sub-infeudation, by which middlemen are introduced between the original grantee and the cultivator. Land-jobbers and speculators obtained leases for the purpose of re-selling them. In order to recoup his initial outlay, the original lessee often sub-let to smaller lessees in return for cash payments. And the same process was carried on lower down the chain, with the result that the land was eventually reclaimed and cultivated by peasant cultivators paying rack-rents. It was accordingly decided in 1904 to abandon this system and to introduce a system of ryotwāri settlement as an experimental measure, *i.e.*, small areas will be let out to actual cultivators, assistance being given them by Government in the form of advances, as well as by constructing tanks and embankments and clearing the jungle for them. The existing rules for the lease of waste lands have been suspended in the meanwhile. In Khulnā, however, almost the whole of the area available for settlement has been already leased to capitalists.

The following table shews the area already settled, with the amount of revenue payable, and the area remaining to be settled in the Khulnā Sundarbans:—

Description.	Area in acres.	Revenue.	
		Present.	Eventual.
		Rs. A. P.	Rs. A. P.
Permanently settled estates ...	61,081·27	38,952 7 9	46,050 7 9
Estates settled under the rules of 1853 ...	121,159	31,107 0 0	35,780 0 0
Estates settled under the large capitalist rules ...	36,696	9,532 0 0	22,209 0 0
Estates settled under the small capitalist rules ...	11,842	14,729 0 0	14,916 0 0
Estates settled under the Regulation and other Acts ...	82,152·25	90,003 7 4	90,144 7 4
Redeemed estates ...	12,801·98	...	...
Waste lands remaining to be settled	3,852·54	...	...
Reserved Forest	1,090,727·54	...	...
TOTAL ...	1,420,312·58	1,84,323 15 1	2,09,099 15 1

It remains to note that by a special enactment, Regulation IX of 1816, the revenue administration of the Sundarbans was at

first placed in the hands of an officer designated a Commissioner in the Sundarbans, who was directly under the Board of Revenue. In the year 1905 that Regulation was repealed by Bengal Act I of 1905, and the Sundarbans area was parcelled out into three parts, one being amalgamated with the district of Backergunge, one with the 24-Parganas, and the third with Khulnā. The Collectors of these three districts now manage all matters connected with the revenue administration of the tract lying in their respective jurisdictions; and the settlement-holders of the estates comprised in the Sundarbans pay the land revenue fixed at periodical settlements, in one or two instalments, into the treasuries at Barisāl, Alipore or Khulnā, the head-quarters stations of the three districts concerned.

ESTATES. At the time of the Permanent Settlement the whole district of Jessore contained only 122 estates, and the number must therefore have been still smaller in this district. The number, however, subsequently rose enormously, the district on its creation in 1882 receiving 971 revenue-paying estates, of which 770 were permanently settled, 179 temporarily settled and 22 held under the direct management of Government; there were also 31 revenue-free estates. This increase was due, in a large measure, to the Permanent Settlement, both because a number of *tāluks* were made separate estates, and also because in the 10 years following its completion, when the large estates began to fall in arrears, it was not the practice to sell up each estate entirely but only a portion, the purchase money of which would be enough to meet the arrear. The large estates being thus parcelled out into shares and sold to the highest bidder, a large number of small estates were created. For instance, the Yusafpur estate alone, which was held by Rājā Srīkānta Rai, was divided three years after the settlement into 100 large and 39 small estates, and sold to as many proprietors. The number of estates was subsequently increased still further as the result of the resumption proceedings.

Excepting the Sundarbans tract, the whole district is permanently settled. The number of permanently settled estates in the district is now 781 and that of temporarily settled estates 199, while 40 estates are under direct management of Government, of which 22 are the property of Government and the rest of proprietors. The revenue-free estates number 61, and there are 52,342 tenures and under-tenures registered in the road cess office, besides 6,081 rent-free lands, which are also tenures. Unlike the rest of the district, the Sundarbans tract is not permanently-settled, and includes 171 estates, which are periodically settled.

In some of these estates Government is the proprietor, the settlement-holder being *mālguzārs*, and in others settlement-holders have proprietary interests.

The proprietors of estates are known as zamīndārs or *tālukdārs*, the latter being generally petty land-holders, who reside on their estates, while the larger proprietors are generally non-resident. The *tāluks* have their origin in the separation of portions of estates, the zamīndārs having disposed of them by sale, gift or otherwise. The persons who obtained possession of such separated portions of zamīndāris either paid their quota of revenue through the zamīndārs or direct to the public treasury. The exactions of the zamīndārs soon obliged them, however, to obtain recognition as owners of distinct estates. The separated portions came to be known as *tāluks*, and the holders as independent *tālukdārs* having rights, privileges and responsibilities in all respects similar to those of the zamīndārs, the difference consisting in origin only.

TENURES. The proprietors of estates have freely exercised the power of alienation and have created a large number of tenures, such as *patnīs*, *ijārās* and *gānthīs*. In creating these tenures, and even in giving a lease for a term of years, it has been and is a common practice for the tenure-holder to pay a bonus or premium, which discounts the contingency of many years' increased rent. The system, while meeting the zamīndār's present necessity, means a loss to his posterity, because it is clear that if the bonus were not exacted, a higher rental could be obtained permanently from the land. The process of sub-infeudation has not terminated with the *patnīdārs*, *ijārādārs* and *gānthīdārs*. There are lower gradations of tenures under them called *darpatnīs*, *darijārās* and *dargānthīs*, and even further subordinate tenures called *sepatnīs*, *segānthīs*, etc. Many of the under-tenures are of petty size and were originally ryoti holdings. The present holders having in course of time acquired the status of under-tenure-holders, now collect rents from the ryots as middlemen and pay them over to the superior landlords, keeping some profit for themselves.

In many cases entire estates are in the direct possession of *patnīdārs* or *gānthīdārs*, but there are also instances in which portions of estates are directly under the proprietors, the remaining portions being held by tenure-holders. Landlord's private lands are called *khās khāmār* or *āmānat khāmār*, and are cultivated either by his own men or hired labourers, or by cultivators, called *bargādārs*, who give half the produce to the landlord. The following is a brief account of the principal tenures.

Gānthīs. Tenure-holders holding directly under zamīndārs are known as *tālukdārs* or *gānthīdārs*, and when holding under revenue-paying *tālukdārs* as *gānthīdārs*. The word *gānthī* means assigned or allotted, and probably such tenures were originally created by the zamīndārs for the reclamation of waste land; but in process of time the term came to be applied to any tenure held immediately under a proprietor or independent *tālukdār*. These tenures are heritable and transferable, and the *gānthīdārs* have freely exercised their power to create under-tenures. There are several grades of under-tenure-holders below them called *dargānthīdārs*, *segānthīdārs*, etc., down to nine degrees. Some *gānthī* tenures are, *mukarrarī*, *i e.*, tenures held at a fixed rent, and others are *maurasi*, *i.e.*, hereditary tenures.

Tāluks and hawālās. *Tāluks* are tenures chiefly found in the east and south of the district, which correspond to the *gānthīs* of the old settled tracts. In this part of the district, especially in the Salīmābād *pargana* of the Bāgherhāt subdivision, sub-infeudation has been carried to extreme lengths, and there is a great variety of intermediate tenures between the *tālukdār* and the actual cultivator, such as *ausat-tāluk hawālā*, *ausat-hawālā*, *nim-hawālā*, and *nim-ausat-hawālā*. The word *ausat* means subordinate, and signifies a dependent tenure, while the word *nim* generally indicates that the tenure is a subdivision of the parent tenure. A *hawālā* signifies literally a charge, and is found, in the chain of subordination, either direct under the zamīndār or under the *tālukdār*. The *hawālā* tenure may be created by the zamīndār, if he has not already created a *tālukdār*, and in this case a *tālukdār* subsequently created will take position between the *hawālādār* and the zamīndār. The rights of a *tālukdār*, however, include that of creating *hawālās* within his own tenure; and the *hawālādār*, again, may create a subordinate tenure called *nim-hawālā*, and may subsequently create an *ausat-hawālā*, intermediate between himself and the *nim-hawālādār*. This species of under-tenure originated from the circumstance that the zamīndārs or *tālukdārs*, unable to clear the large tracts of unreclaimed lands included in their properties, divided them into lots, placing each lot in the *hawālā* or charge of an individual and conceding to him some proprietary rights; and as reclamation proceeded, the latter in his turn began to sublet.

In the Sundarbans the term *tāluk* has a meaning different from that in the north of the district, for the Sundarbans grants are themselves called *tāluks*, and their possessors are *tālukdārs*. Here are found reclamation tenures granted for the clearance of jungle, called *jangalburi*, *ābādkari* or *patitābādi*. They are permanent tenures, held exempt from the payment of revenue for a period,

subject to a specific *jamā* (assessment) for lands brought under cultivation.

The *patnī tāluks* are a class of tenures which originated in the estate of the Mahārājā of Burdwān. At the Permanent Settlement the assessment of the estate was very high, and in order to ensure easy and punctual realization of the rent, a number of leases in perpetuity to be held at a fixed rent were given to a large number of middlemen. These tenures are known as *patnī* (literally dependent) *tāluks*, and are in effect leases which bind the holders by terms and conditions similar to those by which superior landlords are bound to the State. A large number were created in this district and in Jessore after the enactment of Regulation VIII of 1819, known as the Patni Sale Law, which declared the validity of such permanent tenures, defined the relative rights of the zamīndārs and their subordinate *patnī tālukdārs*, established a summary process for the sale of such tenures in satisfaction of the zamīndār's demand of rent, and also legalized under-letting, on similar terms, by the *patnīdārs* and others. Since the passing of this law the *patnī* tenure has been very popular with zamīndārs who wish to divest themselves of the direct management of their property or part of it, or who wish to raise money in the shape of a bonus. It may be described as a tenure created by the zamīndār to be held by the lessee and his heirs or transferees for ever at a rent fixed in perpetuity, subject to the liability of annulment on sale of the parent estate for arrears of the Government revenue, unless protected against the rights exercisable by auction-purchasers by common or special registry, as prescribed by sections 37 and 39 of Act XI of 1859. The tenant is called upon to furnish collateral security for the rent and for his conduct generally, or he is excused from this obligation at the zamīndār's discretion. *Patnī tāluks.*

Under-tenures created by *patnīdārs* are called *darpatnī*, and those created by *darpatnīdārs* are called *sepatnī* tenures. These under-tenures are, like the parent tenures, permanent, transferable and heritable; and have generally the same rights, privileges and responsibilities attached to them. They are usually granted on payment of a bonus. Section 13 of Regulation VIII of 1819 provides rules for staying the sale of a *patnī*, if it takes place owing to the intentional withholding of payment of rent by the *patnīdār* with the object of ruining his subordinate tenure-holders. In such cases the under-tenants are allowed the means of saving the *patnī* tenure and their own under-tenures by paying into the Collector's office the advertised balance due to the zamīndār. The *patnī* tenure so preserved forms the necessary

security to the depositors, who have a lien on it in the same manner as if the loan had been made upon mortgage. The depositors may then apply to the Collector for obtaining immediate possession of the defaulter's tenure; and the defaulter will not recover his tenure, "except upon repayment of the entire sum advanced, with interest at the rate of 12 per cent. per annum up to the date of possession having been given, or upon exhibiting proof, in a regular suit to be instituted for the purpose, that the full amount so advanced, with interest, has been realized from the usufruct of the tenure."

RENT-FREE AND SERVICE LANDS. The holders of rent-free lands are called *nishkar-bhogī*. They are tenure-holders under zamīndārs or *tālukdārs*, and are liable to pay road and public works cesses only, which they realize from their ryots while collecting rents. Most tenure-holders of this class pay the assessed cesses direct to Government, but in some cases payment is made through the proprietors. The rent-free lands are heritable and transferable by sale, gift or mortgage like other tenures. There are also service tenures in this district designated *chākrān*, which are heritable, but not transferable.

RYOTS. Occupancy ryots or ryots at fixed rents or fixed rates of rent are called *kāimi krishi prajā* and the non-occupancy ryots *prajā*. Resident cultivators are known as *khudkāsth prajā* and non-resident ryots as *paikāst prajā*, holders of homestead lands as *bhitābāri prajā*, and under-ryots as *korfā prajā*. It is reported that holdings of ryots of the first two classes are being freely transferred by sale, 703 ryots' holdings at fixed rates of rent and 1,392 occupancy ryots' holdings being sold during the year 1906.

CHAPTER XII.

GENERAL ADMINISTRATION.

THE administration of the district is in charge of the Collector under the Commissioner of the Presidency Division. For general administrative purposes it is divided into three subdivisions with headquarters at Khulnā, Bāgherhāt and Sātkhirā. The headquarters subdivision is under the direct supervision of the Collector, who has a staff of four Deputy Collectors, with one or two Sub-Deputy Collectors, while the Bāgherhāt and Sātkhirā subdivisions are each in charge of a Subdivisional Officer, generally a member of the Provincial Civil Service, assisted by a Sub-Deputy Collector. Settlement operations in the Sundarbans are controlled by a special Deputy Collector with headquarters at Calcutta. Khulnā is also the headquarters of a Deputy Conservator of Forests in charge of the Sundarbans Division, who is assisted by an Assistant Conservator and an Extra Assistant Conservator of Forests. ADMINISTRATIVE CHARGES AND STAFF.

The revenue of the district, under the main heads, was Rs. 6,23,000 in 1882-83, when the district was first constituted. It rose to Rs. 11,48,000 in 1890-91 and to Rs. 13,21,000 in 1900-01. In 1906-07 it amounted to Rs. 15,19,000, of which Rs. 6,92,000 were derived from land revenue, Rs. 4,57,000 from stamps, Rs. 2,25,000 from cesses, Rs. 1,12,000 from excise, and Rs. 33,000 from income-tax. REVENUE.

The collections of land revenue increased from Rs. 3,91,000 in 1882-83 to Rs. 6,44,000 in 1890-91 and to Rs. 6,69,000 in 1900-01. In 1906-07 they amounted to Rs. 6,92,000 collected from 1,020 estates. The gradual increase is attributed to enhancements obtained from temporarily settled estates in the Sundarbans; and the revenue from this source is expected to increase still further as land is reclaimed and improved. Altogether 781 estates with a current demand of Rs. 5,12,000 are permanently settled, and 203 estates with a demand of Rs. 1,74,000 are temporarily settled, while there are 36 estates, with a demand of Rs. 31,000, held direct by Government. Land revenue.

Stamps.

Next to land revenue, the most important source of revenue is the sale of stamps, the receipts from which amounted to Rs. 2,99,000 in 1895-96, and averaged Rs. 3,35,000 per annum in the quinquennium ending in 1899-1900. During the five years ending in 1904-05 the annual receipts averaged Rs. 3,86,000, and in 1906-07 they were Rs. 4,57,000, as against Rs. 3,21,500 in 1896-97. The increase is almost entirely due to the greater sale of judicial stamps caused by the growth in the number and value of rent and civil suits.

Cesses.

Road and public works cesses are, as usual, levied at the maximum rate of one anna in the rupee. The collections increased from Rs. 1,56,000 in 1896-97 to Rs. 1,64,000 in 1900-01, and to Rs. 2,25,000 in 1906-07. The current demand in the year last named was Rs. 2,28,000, of which the greater part (Rs. 2,06,000) was due from 1,698 revenue-paying estates, while Rs. 9,500 were payable by 61 revenue-free estates, and Rs. 12,500 by 6,081 rent-free lands. The number of estates assessed to cesses is 7,840, and the number of recorded share-holders is 7,589. There are 52,342 tenures assessed to cesses with 61,856 share-holders; and the number of tenures is thus nearly seven times that of estates. The total demand of cesses (Rs. 2,28,000) is nearly equal to a third of the demand of land revenue (Rs. 7,17,000).

Excise.

The next important source of revenue is excise, the receipts from which increased from Rs. 75,000 in 1896-97 to Rs. 1,12,000 in 1906-07—a total lower than in any other district in the Presidency Division except Jessore. Over a third of this sum was obtained from the duty and license fees levied on *gānja*, *i.e.*, the unimpregnated dried flowering tops of the cultivated female hemp plant (*Cannabis indica*) and the resinous exudation on them; the amount thus realized was Rs. 41,260 in 1906-07. The total incidence of the revenue accruing from hemp drugs was only Rs. 338 for every 10,000, and the number of shops licensed to sell by retail was one to every 16,487 persons.

After *gānja* the largest item in the excise revenue consists of the receipts from the sale of country spirit, which in that year realized Rs. 33,055 or nearly a third of the total. The manufacture and sale of country spirit are carried on under what is known as the contract supply system, which was introduced in 1906. Under this system the local manufacture of country spirit has been prohibited, and a contract has been made with a firm of distillers for its supply. The contractors are forbidden to hold any retail licenses for the sale of the spirit, but are allowed the use of distillery and depôt buildings for the

storage of liquor. The spirit is brought from the distillers to the various depôts, and is there blended and reduced to certain fixed strengths, at which alone it may be supplied to retail vendors and sold by the latter to consumers. The receipts from the license fees and duty on this spirit are less than in any other district in the Presidency Division except Jessore, representing Rs. 297 per 10,000, as compared with Rs. 3,716 for the Division and Rs. 2,147 for the whole of Bengal. There are altogether 37 shops licensed for its sale, *i.e.*, one retail shop to every 56·1 square miles and 33,866 persons; the average consumption of the liquor is 4 proof gallons per 1,000 of the population, and the incidence of taxation is only 5 pies per head of the population.

The receipts from opium account for practically all the remainder of the excise revenue, amounting in 1906-07 to Rs. 32,167 or Rs. 256 per 10,000 of the population, as against the average of Rs. 907 returned for the Presidency Division and Rs. 463 for the whole of Bengal.

Income-tax.

In 1896-97 the income-tax yielded Rs. 32,000 paid by 1,760 assessees, and in 1901-02 the amount derived from the tax had increased to Rs. 46,000 and the number of assessees to 2,493. At that time the minimum income assessable was Rs. 500, but this was raised to Rs. 1,000 in 1903, thereby affording relief to a number of petty traders, money-lenders and clerks. The number of assessees consequently fell in 1903 to 689 and the collections to Rs. 30,000. In 1906-07 the tax brought in Rs. 33,179 paid by 744 assessees.

Registration.

There are 13 offices for the registration of assurances under Act III of 1877. In the five years 1895-99 the average number of documents registered annually was 44,580, and in the next quinquennium (1900-04) it was 43,600. In 1907 the number rose to 51,630 as shown in the marginal statement, which gives the salient statistics for that year. This large increase is ascribed to the high prices prevailing in the district and to an unusual demand for land among jute cultivators, who have found such cultivation more profitable than that of paddy.

Name.	Documents registered.	Receipts.	Expenditure.
		Rs.	Rs.
Khulnā	6,580	11,529	8,274
Ditto joint at Khulnā ...	3,221	2.783	2,133
Bāgherhāt	5,158	4,523	1,722
Ditto joint (Kachuā)	1,640	1,335	1,431
Dumriā	4,541	3,357	2,720
Kalāroā	3,576	2,960	1,596
Kāliganj	4,210	3,929	2,329
Māgurā	3,961	3,131	2,194
Mollāhāt	3,107	2,085	1,807
Morrellganj	6,052	5,693	2,390
Pāikgāchā	2,682	2,373	1,667
Rāmpāl	3,017	2,583	2,040
Sātkhirā	3,885	3,621	2,395
Total ...	51,630	49,902	32,698

ADMINISTRATION OF JUSTICE.

Civil justice.

Khulnā was included within the jurisdiction of the District and Sessions Judge of Jessore until 1908, when a separate District Judge was appointed. The local civil courts are those of two Sub-Judges at Khulnā and of nine Munsifs, of whom two sit at Khulnā, three at Bāgherhāt and four at Sātkhirā.

Criminal justice.

Criminal justice is administered by the District Magistrate and the various Magistrates subordinate to him. The sanctioned staff at Khulnā consists, in addition to the District Magistrate, of three Deputy Magistrates of the first class and one Deputy Magistrate of the second or third class. Besides these officers, one or two Sub-Deputy Magistrates with third class powers are generally posted to the headquarters station. The Subdivisional Officers of Bāgherhāt and Sātkhirā are almost invariably Magistrates of the first class, and are generally assisted by a Sub-Deputy Magistrate vested with second or third class powers. In addition to the stipendiary Magistrates, there are Benches of Honorary Magistrates at Khulnā, Bāgherhāt and Sātkhirā.

Crime.

Except in the extreme east of the district, where some degree of lawlessness regarding land and women is common, there is no particular tendency to crime among the population. Some years ago, the inhabitants of the Morrellganj thāna in the Bāgherhāt subdivision had an evil reputation for turbulence, and cases of rioting with deadly weapons were frequent, particularly during the rice harvesting season. The number of such cases has however decreased considerably of late years. Agrarian crime is most common in the *ābāds* or Sundarbans clearings, which have become a byword for land disputes and riots. The outpost at Dākupi was especially established a few years ago to check the increasing volume of crime in these parts. Counterfeit coining has gone on for some time, and recently some members of a gang of professional coiners known as Bauriās from Mārwār in Rājputāna were arrested and convicted.

The form of crime most characteristic of the district is river dacoity; but much of the crime on the waterways is not reported. For instance, during a period of 5 years (1900-04) only 12 river dacoities were reported, but it was subsequently discovered that at least 34 such dacoities had been committed, but not brought to light. It is, moreover, the worst district of all those affected by riverain conditions for losses of jute and rice cargoes, the waters in the neighbourhood of Khulnā, Alāipur, Kālīganj and Bāgherhāt being particularly notorious in this respect. There are six well-known gangs of professional criminals, numbering in all about 500 persons, which appear to be composed of the

following classes:—(1) Hired *lāthiāls* from Jessore, hired during the paddy-cutting season. (2) Dacoits banded together in gangs of 20 to 25, who man light fast-going boats and attack empty boats, the *mānjhis* of which carry cash for the purchase of grain or the proceeds of its sale. (3) Dacoits who cut the anchor ropes of grain-laden boats and allow the boat to drift down to opposite their village, whence *dingīs* put off and take the grain. (4) Mixed gangs of Barisāl and Khulnā Muhammadan *badmāshes*, and the Sāth Bhaiyā, a set of dacoits who take refuge in the waterways and jungles around Morrellganj, where they can loot stragglers with impunity along the outer waterways of the Sundarbans. (5) Smugglers of forest produce and salt, and some thugs from the islands. There is also evidence that gangs of Banpar Mallāhs from Bihār work along the trade routes and, when necessary, do not hesitate to resort to violence.

Police.

For police purposes the district is divided into 13 thānas with 12 outposts as shown in the margin. Some of the latter have been declared police stations for the purposes of investigation. There are also 7 river patrols for the protection of river traffic and for the prevention and detection of crime on the waterways. The regular police force consisted in 1908 of the Superintendent of Police, 4 Inspectors, 42 Sub-Inspectors, 46 Head-Constables, and 357 constables, exclusive of 48 men employed in river patrols. The total strength of the force was, therefore, 450 men representing one policeman to every 4·2 square miles and to every 2,578 of the population. There is a small body of town police in the municipalities; and the rural police for the watch and ward of villages in the interior consists of 153 *dafadārs* and 2,346 *chaukīdārs*, representing one *chaukīdār* to every 534 inhabitants.

Subdivision.	Thāna.	Outpost.
Khulnā ...	Khulnā ...	Khulnā Town. Phultalā.
	Baitāghātā ...	...
	Dumriā ...	...
	Pāikgāchā ...	Dākupi.
Bāgherhāt ...	Bāgherhāt ...	Kachuā. Fakirhāt (I. O. P.).
	Mollāhāt ...	...
	Morrellganj ...	Sarankholā.
	Rāmpāl ...	...
Sātkhirā ...	Sātkhirā ...	Sātkhirā Town.
	Asāsuni ...	Budhātā.
	Kalāroā ...	Debhātā. Debhātā Town.
	Kāliganj ...	Syāmnagar. Pratāpnagar.
	Māgurā ...	...

Salt Department.

Khulnā is a saliferous tract in which a preventive establishment is entertained to prevent the illicit manufacture of salt and to survey the saline tracts. This establishment is directly under the control of the Collector and consists of one Inspector, three

Sub-Inspectors, six *jamādārs* and 62 peons. The district has been divided into three ranges with headquarters at Bardal in thāna Asāsuni, at Chalnā in thāna Pāikgāchā, and at Morrellganj. The Inspector supervises the work of the three ranges, each of which is in charge of a Sub-Inspector with two patrol parties, each composed of one *jamādār* and 9 peons. The salt officers have also been empowered to inspect excise shops and to make enquiries connected with the income-tax, and their services are sometimes utilized to help the local police in case of breaches of the peace and river dacoities. For work on the rivers two cutters are maintained, each manned by one *mānjhi* and 6 boatmen.

JAILS. There is a district jail at Khulnā and a subsidiary jail at each of the outlying subdivisional headquarters, viz., Bāgherhāt and Sātkhirā. The subjail at Bāgherhāt has accommodation for 35 prisoners, viz., 9 male convicts, 3 female convicts and 23 under-trial prisoners, and that at Sātkhirā for 12 prisoners, viz., 9 male and 3 female convicts. The district jail has at present accommodation for 49 prisoners, viz., for 22 male convicts, 5 female convicts, 13 under-trial prisoners, and 3 civil prisoners; while there is a hospital with beds for 6 patients. Sanction has been given to an extension of the jail, which will involve the addition of the following among other buildings:—barracks for 80 prisoners, divided into 4 wards, one of which will have cubicles in order to separate juvenile prisoners; a hospital, containing a fever ward and a dysentery or ordinary ward, each with 8 beds; a female ward with accommodation for 8 prisoners; four cells, one for female, and three for male prisoners; and two work-sheds. There will also be a two-storied main gate building, containing jailors' quarters, the civil jail, various offices, and quarters for 21 warders; and provision is also to be made for under-trial and segregation wards. The industries carried on in the district jail are oil-pressing, wheat-grinding, paddy-husking, mat-making, aloe-pounding and rope-making.

CHAPTER XIII.

LOCAL SELF-GOVERNMENT.

OUTSIDE the municipalities of Khulnā, Sātkhirā and Debhātā, the administration of local affairs, such as the management of roads, the control of dispensaries and the provision of sanitation, etc., rests with the District Board, assisted by the Local Boards of Khulnā, Bāgherhāt and Sātkhirā and by the Union Committees of Senhātī, Dumriā, Bāgherhāt, Mulghar, Kalāroā and Māgurā. DISTRICT BOARD.

The District Board consists of 17 members, of whom four are nominated by Government and eight are elected, while five are *ex-officio* members. Its average annual income during the 10 years ending in 1901-02 was Rs. 1,17,000, of which Rs. 69,000 were derived from Provincial rates; and the average annual expenditure was also Rs. 1,17,000, of which Rs. 65,000 were spent on civil works, Rs. 28,000 on education, and Rs. 4,000 on medical relief. In 1906-07 its income was Rs. 2,20,000 (excluding an opening balance of Rs. 68,000), the principal receipts being Rs. 1,07,000 derived from rates, Rs. 74,000 obtained from civil works (including Rs. 59,000 from contributions and Rs. 14,000 from tolls on ferries), Rs. 26,000 contributed by Government and Rs. 5,000 obtained from pounds. The incidence of taxation is light, being only one anna four pies per head of the population. The expenditure in the same year was Rs. 2,17,000, of which Rs. 1,52,000 were spent on civil works, Rs. 39,000 on education, and Rs. 12,600 on medical relief.

The District Board maintains 535·6 miles of roads, of which 27·6 miles are metalled and 508 miles are unmetalled, besides a number of village roads with an aggregate length of 928 miles; the cost of maintaining these roads in 1906-07 was Rs. 158, Rs. 58 and Rs. 14 per mile respectively. The Board also keeps up 98 pounds, which bring in an income of Rs. 5,000. Its educational expenditure is devoted to maintaining one Middle school and one industrial school (the Khulnā Coronation Technical school), and to aiding 48 Middle schools, 76 Upper Primary schools and 675 Lower Primary schools. It also maintains no less than 11 dispensaries and aids three others; in 1906-07 altogether 5-6

per cent. of the ordinary income of the Board was expended on medical relief and sanitation.

LOCAL BOARDS. In subordination to the District Board are the Khulnā, Bāgherhāt and Sātkhirā Local Boards, the jurisdiction of each corresponding to the subdivisional charge of the same name. The Khulnā Local Board has 12 members, all nominated by Government. The Bāgherhāt Local Board has 12 members, of whom three are elected, eight are nominated by Government, and one is an *ex-officio* member. The Sātkhirā Local Board has 15 members, of whom eight are elected, six are nominated, and one is an *ex-officio* member. The functions of these bodies are unimportant, consisting mainly of the administration of village roads and the control of pounds and ferries.

UNION COMMITTEES. There are 6 Union Committees in the district, viz., Senhāti (20 square miles), Dumriā (5 square miles), Bāgherhāt (12 square miles), Mulghar (20 square miles), Kalāroā (20 square miles) and Māgurā (50 square miles), with an aggregate population of 67,077. The first four Union Committees were created in 1895 and the last two in 1896. The Committees are each composed of 9 members, and the duties entrusted to them consist of village sanitation and the upkeep of village roads and drains within their respective jurisdictions.

MUNICIPALITIES. At the close of the year 1906-07 there were 3 municipalities in the district, viz., Khulnā, Sātkhirā and Debhātā. The number of rate-payers was 5,001, representing 19 per cent. of the total number (26,315) of persons residing within municipal limits, as compared with the average of 19·7 per cent. for the whole of the Presidency Division. The average incidence of taxation in that year was annas 13-8 per head of the population, as against the Divisional average of Re. 1-7-8, and varied from annas 4-6 in Debhātā to Re. 1-6-8 in Khulnā.

Khulnā. The Khulnā Municipality was established in 1884, and its affairs are administered by a Municipal Board, consisting of 15 members, of whom ten are elected, and one is nominated, while four are *ex-officio* members. The area within municipal limits is 4·64 square miles, and the number of rate-payers is 2,000 or 19 per cent. of the population. The average annual income for the decade ending in 1901-02 was Rs. 21,600, and the expenditure was Rs. 19,800. In 1906-07 the receipts amounted to Rs. 24,000, besides an opening balance of Rs. 20,000, the main sources of revenue being a tax on persons, levied at the rate of 1 per cent. on the annual income of the rate-payers, which brought in Rs. 5,000. There is also a conservancy rate, levied at the rate of 12 per cent. on the valuation of holdings. This rate also realized Rs. 5,000

and Rs. 4,000 were obtained from a tax on houses and lands. The total income from municipal rates and taxes was Rs. 15,000, and the incidence of taxation was Re. 1-6-8 per head of the population. The expenditure in the same year was Rs. 35,000, of which Rs. 14,000 or 50·1 per cent. were spent on water-supply, and Rs. 6,000 or 21·5 per cent. on conservancy, while Rs. 6,200 or 22·7 per cent. were expended on medical relief.

Sātkhirā. The municipality at Sātkhirā was established in 1869. It is administered by a Municipal Board consisting of 12 members, of whom eight are elected and four are nominated by Government. The area within municipal limits is 12 square miles, and the number of rate-payers is 2,037, representing 19·6 per cent. of the population residing within the municipal area. The average annual income for the decade ending in 1901-02 was Rs. 4,600 and the expenditure was Rs. 4,500. In 1906-07 the receipts amounted to Rs. 8,500, besides a small opening balance of Rs. 400. The principal sources of revenue are a tax on persons levied at the rate of 1 per cent. on the annual income of the rate-payers, which brought in Rs. 4,000, and a latrine tax levied at the rate of 12 per cent. on the annual value of holdings, which brought in Rs. 1,300. The aggregate income from municipal rates and taxes was Rs. 6,200, and the incidence of taxation was annas 9-6 per head of the population. The expenditure in the same year was Rs. 8,600, of which Rs. 3,000 or 33·5 per cent. were expended on medical relief, Rs. 1,600 or 18 per cent. on conservancy and Rs. 1,100 or 12·3 per cent. on water-supply.

Debhātā. Debhātā was constituted a municipality in 1876 and is administered by a Municipal Board consisting of 12 members, all of whom are nominated by Government. The area within municipal limits is 3·3 square miles, and the number of rate-payers is 964 representing 17·6 per cent. of the population living within the municipal area. The average annual income and expenditure for the decade ending in 1901-02 were Rs. 2,200 and Rs. 2,000 respectively. In 1906-07 the total income was Rs. 1,800, the principal item in the receipts being a tax assessed at the rate of 1 per cent. on the annual income of the rate-payers, which brought in Rs. 1,500. The expenditure in the same year was Rs. 1,700, the principal item being public works which accounted for 43 per cent. of the disbursements.

CHAPTER XIV.

EDUCATION.

PROGRESS OF EDUCATION.

At the census of 1901 special enquiry was made regarding the literacy of the people, the test of literacy being the ability both to read and write. People of whatever age who could do this were entered as literate, and those who could not, as illiterate. The qualification seems a simple one, but even so only 6·9 per cent. of the population of Khulnā could pass it, the proportion in the case of males being 12·4 per cent. and in the case of females 0·8 per cent. On the other hand, no other district in the Presidency Division had such a good record, except the 24-Parganas; and the advance since 1881 has been very noticeable, for in that year only 6·7 per cent. of the males and 0·1 per cent. of the females of the district could read and write.

According to the statistics prepared by the Education Department, there were altogether 752 schools attended by 21,822 pupils in the latter year, and the number rose to 1,257 schools and 30,269 pupils in 1891. During the next 10 years many schools were closed owing to the distress caused by natural calamities, for the crops were short in 1893-94, part of the district was visited by a cyclone in 1895, and there was a famine in 1897. The result was that in 1900-01 the number of schools had declined to 983 and the attendance had only increased to 34,356. The loss has since been made good, for in 1906-07 there were, in addition to an Arts college, 1,102 schools with 40,114 pupils on the rolls. For the supervision of the schools there is a staff consisting of 2 Deputy Inspectors of Schools, 7 Sub-Inspectors and one Assistant Sub-Inspector.

The majority of the schools are situated in the more advanced tracts bordering on the rivers, which contain large and populous villages inhabited by the higher classes of Musalmāns and Hindus. The southern parts of the district bordering on the Sundarbans, and the marshy tracts intervening between the rivers, are inhabited chiefly by Pods, Chandāls, and the lower classes of Musalmāns, themselves descendants of converted Pods and Chandāls. In these tracts there are only a few Middle class schools,

and even the Primary schools are few and far between, and are thinly attended. Moreover, many of the latter are either closed or remain open only in name during the busy seasons of ploughing, sowing, transplantation, and reaping, when the boys are required to look after the cattle, and to perform other unimportant agricultural work, while the adults are busy in the fields.

There is one Arts college in the district established a few years ago at Daulatpur, called the Khulnā-Daulatpur Hindu Academy. It is now affiliated to the University, and is reported to be doing good work; it has a boarding house attached to it. COLLEGIATE EDUCATION.

There are no less than 23 High schools in the district, attended by 3,628 pupils, giving an average of 158 pupils to each school. One of these schools, the Khulnā Zilā school, is maintained by Government, one, the Paygrām-Kasbā High school at Kasbā, is aided by the District Board, and eight are aided by Government, viz., the Bāgherhāt school, the Sātkhirā Prānnāth school at Sātkhirā, the B. De School at Tālā, the Bāhirdiā school at Mansā, the Daulatpur school, the Khareriā school at Mulghar, the Naldha school at Naldha, and the Babulia Jaimini Srīnāth Institution at Babulia. There are also 12 unaided schools, viz., the Ajogara school at Pāl's Hāt Bazar, the Banagrām Century school at Banagrām, the Khalisākhāli-Māgurā school at Khalisākhāli, the Khālishpur, Nakipur, Phultalā, Senhātī, Rāngdiā and Miksimil schools, the Phultalā Union school at Paygrām, and the Raruli-Katipara-Banka-Bhawānīpur Harischandra Institution at Raruli. The number of schools of this class and the large attendance at them are eloquent of the increasing demand for English education, for in 1881 there were only 4 High schools attended by 439 boys and the number gradually rose to 8 schools with 1,250 pupils in 1890 and to 17 with 3,185 pupils in 1900-01. There are two hostels attached to the Khulnā Zilā School, one for Hindu and the other for Muhammadan students. SECONDARY EDUCATION.

There has been a similar increase in the number of Middle English schools, the number rising from 12 in 1881 to 19 in 1890 and to 26 in 1900-01, the attendance rising in the same three years from 643 to 1,429 and 1,730. There are now altogether 32 schools of this class attended by 2,110 pupils, giving an average of 63 pupils at each school. There has, however, been a decrease in the number of Middle Vernacular schools, of which there were 46 with 2,226 boys on the rolls in 1890; for though the number of these schools rose to 48 and the attendance to 2,337 in 1901, the returns for 1906-07 show only 36 schools with 1,662 pupils, representing an average of 46 per school. The gradual decline

of Middle Vernacular schools is not a feature peculiar to Khulnā and is partly explained by the fact that some of these schools have been raised to the status of Middle English schools.

PRIMARY EDUCATION. The number of boys' Primary schools in 1906-07 was 855, at which instruction was given to 29,196 pupils. Of these schools, 100 attended by 4,205 boys were Upper Primary schools, and 755 attended by 24,991 boys were Lower Primary schools, the average attendance at each class of school being 42 and 33 respectively. The progress of primary education in Khulnā does not appear from the returns to be very satisfactory, for in 1890 there were 1,141 Primary schools attended by 27,530 pupils, while the number of schools fell in 1900-01 to 875 and of the pupils to 25,946. The number of schools has still further declined since the year last named, though this is not altogether a matter of regret as it is due to the disappearance of many weak and ephemeral schools. The number of pupils has increased by a little more than 3,000, but it is still only 1,500 more than in 1890 in spite of the subsequent growth of the population.

FEMALE EDUCATION. The progress of female education on the other hand has been very marked in recent years, the number of girls receiving instruction having risen during the last five years from 2,610 to 4,221, representing an advance of over 60 per cent. There are now 123 schools with 2,640 girls on the rolls, and besides these there are 1,581 girls studying in boys' schools. The Khulnā Municipal girls' school has recently been converted into a Model Primary school, and it is noticeable that 23 girls attend Middle English schools.

TECHNICAL EDUCATION. The only technical institution in the district is the Coronation Technical school at Khulnā opened in 1905, which is maintained and managed by the District Board. The boys are taught carpentry and weaving, and the number on the rolls is 40. There is also an agricultural garden attached to the Zilā school; and there is a technical department attached to the Khulnā National School mentioned below.

TRAINING SCHOOLS. There are 3 schools for the training of Primary schools teachers, known as Guru-training schools or third grade training schools, situated one in each of the 3 subdivisions. A training school was also opened at Nandanpur in 1905 for the education of Hindu and Muhammadan widows and schoolmasters' wives, but this school was closed from the 1st May 1907 until a competent teacher could be found.

OTHER SCHOOLS. Among other schools may be mentioned a National School, established at Khulnā in 1907, which has about 100 boys on the rolls. It is under the management of some members of

the local Bar, and is maintained by private subscriptions. There is also a separate school at Khulnā for infant boys of 4 to 6 years of age. Other schools include 6 Sanskrit *tols*, 10 Muhammadan *maktabs* and 11 night continuation schools. There is also one private institution, a Korān school, which is attended by 25 boys.

MUHAMMADAN EDUCATION. The Muhammadans of the district cannot be described as otherwise than backward in respect of education. Though they account for 61 per cent. of the population, while the Hindus represent only 39 per cent., the number of Hindus at schools is 26,485 or 66 per cent. of the total number, whereas the Muhammadans account for only 13,458 pupils or 33·55 of the total number receiving instruction.

LIBRARIES AND NEWSPAPERS. There are six libraries situated at Khulnā, Sātkhirā, Srīpur, Māgurā, Khesrā and Kukrul; besides three new libraries established in 1904-05, viz., one at Karapārā, another at Bāgherhāt called the Harisabhā Library, and a third at Belphuliā. There are two weekly newspapers, the *Khulnābāshī*, which has some local importance, and the *Jāgaran* published at Bāgherhāt. Another weekly paper, the *Khulnā*, was formerly published, but ceased to exist in 1904. It was revived in 1906 and then again disappeared, the *Khulnā Surhid* taking its place.

CHAPTER XV.

GAZETTEER.

Alāipur.—A village in the Khulnā subdivision, situated at the junction of the Athārabānkā and Bhairab rivers. Population (1901) 1,190. It had formerly a large local trade, but owing to the silting up of the Bhairab its importance as an entrepôt is on the decline. There is still, however, a considerable sale of *gur* or molasses, and excellent pottery is manufactured. Professor Blochmann surmises that Alāipur may have been the residence of Sultān Alā-ud-dīn Husain Shāh at the close of the 15th century before he became king of Bengal.

Amadi.—A village in the Khulnā subdivision, situated on the river Kabadak about 7 miles south of Chāndkhāli. Close to the river bank are two tombs placed lengthways north and south, which are said to be the tombs of Bura Khān and Fateh Khān, father and son, two followers of Khān Jahān Alī. The northern tomb is on the bank of the river, and was said to be on verge of falling into it in 1870. These tombs were once cemented, but nearly all the cement has worn off, and they have now the appearance of ordinary brick tombs. A little further south is a raised piece of land, with a brick foundation, surrounded by two or three small tanks and a long artificial trench. According to local tradition, this elevation marks the site of the cutcherry (*kāchhāri*) of Bura and Fateh Khān. Further south still is a large tank called the Kalki-dīghī; it is now a mass of marshy jungle, but the surface included within its high embankments is said to measure 100 *bighās*. The tank has no masonry *ghāt*, but in the centre of each of the four sides rises a cluster of tamarind trees. Along the river bank, at a point a little beyond the tombs, is another large tank called the Hāthībāndh. Near this tank, Sir James Westland writes in his *Report on the District of Jessore*, "there lies, and has lain during all the memory of the present generation, a cylindrical piece of grey stone about two feet long. Its ends are square, and its circumference cut into twelve facets. Round the middle of it is a high band, and there is a device, alternate triangle and square, carried round the twelve facets. This stone, whatever it

was meant for, came from a long distance away, for no such stone can be found for 150 miles round."

Asāsuni.—A village in the Sātkhirā subdivision, situated 20 miles (by river) south-east of Sātkhirā at the junction of the Sobnāli and Asāsuni rivers. There is an anchorage place here for boats proceeding eastward while waiting for the tide. The village contains a police station, a Public Works Department bungalow and a large bazar; an annual fair is held during the Dol Jātrā.

Bāgherhāt.—Headquarters of the subdivision of the same name, situated in 22° 40′ N. and 89° 47′ E. on the Bhairab, 22 miles (by river) south-east of Khulnā. Population (1901) 1,124. The town was formerly connected with Khulnā by a daily steamer service, but this has been discontinued owing to the silting up of the Alāipur *Khāl*, and has been replaced by a daily service of boats.

There is a masonry *ghāt* or landing place on the bank of the river, and opposite this *ghāt*, and within 200 yards from it, is a double-storied building which contains both the Subdivisional Officers' residence and court. To the right of the *ghāt* is a building erected a few years ago for the courts of the three Munsifs stationed here, and a little beyond it is the *dāk* bungalow. Further on there are a pleaders' library, charitable dispensary, police buildings, sub-jail, mortuary, and the Munsifs' residential quarters. All these buildings, except the courts of the Munsifs, face a metalled road, which runs along the river bank and is the principal road of the station. In front of the sub-jail is a reserved tank, from which the people obtain their drinking water, the water being said to be so good that people come from a distance of four miles by road or river for it. To the left of the landing *ghāt* and close to it is a bazar, both sides of which are lined with shops. The bazar is called Mādhabganj, after a member of a family of zamīndārs residing at Karapārā, a village about 3 miles distant from Bāgherhāt. Here a bi-weekly market is held on Sundays and Wednesdays, when boats come from Morrellganj, Khulnā, and other places, and a brisk trade is carried on in rice, betel-nuts, coconuts, etc. The chief exports are paddy and betel-nuts, most of which go to Calcutta. Two large fairs, lasting for a month, are held in the winter, when merchants and traders come in large numbers to dispose of their goods. The principal educational institution is a High school aided by Government.

Bāgherhāt was made the headquarters of the subdivision in 1863, prior to which date it was only a piece of low jungle land on the banks of the Bhairab, entered on the map simply as

Baghir. It was, however, a place of some local importance at the end of the 18th century. There are some remains, dating back to this period, immediately adjacent to the subdivisional compound, where there is a small space of ground raised a few feet above the level of the surrounding land. Here the remains of brick enclosure walls and the foundations of a small brick building have been found, and at the southern end of the enclosure are two tanks, the largest of which is known as the Nātkhānā, or ball-room tank. In the same enclosure is another old tank, called the Mithā-pukur, on one side of which an old *ghāt* or flight o[f] steps was discovered two feet below the surface, when it wa[s] re-excavated in 1868. The steps were worn, but the floor abov[e] them, which had ornamental brick work, was in good preservation. These ruins date back to the last half of the 18th century and mark the site of the office, treasury and court of a Muhammadan lady, called the Bahu Begum, who received from the Nawāb of Murshidābād a *jāgīr* in this part of the country, including a ⅜th share (6 annas) of the Khalīfatābād *pargana*, within which Bāgherhāt lies. At the time of the Permanent Settlement Government commuted this grant into a money allowance, which the Begum enjoyed till 1794, when she died and the *jāgīr* lapsed.

The name of the place is also spelt Bāgerhāt, Bāghirhāt and Bāgh-hāt. The origin of the name is not known and is the subject of several theories. One theory is that it is a corruption of Bānkerhāt or the market (*hāt*) at the turn of the river, for the place lies just beyond a bend of the Bhairab, and *bānk* means the winding or reach of a river. Others say that the place was formerly surrounded by jungle which was full of tigers (*bāgh*); and an alternative derivation is that a Muhammadan named Bākar established a market here. Another plausible suggestion is that the market was set up in what was once the garden of Khān Jahān (known locally as Khān Jahān Alī or Khānja Alī) who, [as] related in Chapter II, settled and died here in the 15th cen[tury].

In the neighbourhood of Bāgherhāt there a[re] some [...] of considerable archæological interest erecte[d ...] Kh[ān ...] They are approached by an old road, 12 f[eet] wide [...] laid with bricks, which runs in a westerly direction f[...] This road is known as Khān Jahān's r[...] it was constructed by him. At a dis[tance ...] road are the remains of a small mosq[ue ...] road, also constructed by Khān J[ahān ...] ks, runs southward to his tom[b ...] round the t[...]d, which is believed to ha[ve ...]

litt[...] bāndh. Near [...] *Report on the Distric[t ...]* during all the memory [...] piece of grey stone abo[...] its circumference cut into [...] is a high band, and th[...] square, carried [...] ain [...] rical [...], and [...] of it [...] gle and [...] hatever it

earth obtained from a tank, called the Thākur-dīghī, which he excavated. Proceeding a little further on, the ruins of a gateway are met with, passing through which we come to the *dargāh* or mausoleum of Khān Jahān.

The mausoleum is a splendid specimen of the solid masonry work of the 15th century, which even the influence of the climate has not been able to affect. It is a solid brick building, 42 feet 8 inches square, covered by a large dome with an ornamental pinnacle at the top; the height of the outside walls to the spring of the dome is 24 feet 2 inches. In the centre is the tomb of Khān Jahān, a stone sarcophagus, resting on a double stone terrace. The latter again stands on a brick terrace, which was ornamented with glazed tiles of various patterns, blue and white being the predominating colours. The floor was also laid out with similar hexagonal tiles, which formed one of the most attractive features of the building. But most of them have been removed, and unfortunately they cannot be replaced, as recent experiments at Gaur have shewn that it is impossible at present to produce glazed tiles to match the old ones. Some well-preserved specimens, however, are in the Indian Museum, and others are placed round the sarcophagus. The custodians of the tomb allege that the damage is due to thieves entering the place at night, and digging into the tomb, in the hope of finding treasure, in spite of the veneration in which the saint is held.

The sarcophagus is covered with a black stone, about 6 feet in length with a rounded top; and the terraces below it have stone slabs over them covered with inscriptions, all pious sentences in Arabic and Persian. On the rounded stone of the sarcophagus there are 104 squares, the first five squares containing an inscription "The God, the only God, who is—"; in the remaining 99 squares are as many epithets of God, such as the Merciful, the Everlasting, the Equitable, etc. Within a triangle on the south side of this stone the following is inscribed—"This tomb is a part of the garden of Heaven for the great Khān, Khān Jahān. God be merciful to him. Written on the 26th Zil Hijjah in the year 863." This date corresponds to the 23rd of October 1459. In the centre of the slab on the south of the terrace supporting this stone there is a square enclosing a circle, which contains the following inscription:—"A poor slave of God, who was old and weak and prayed for mercy, and who was a friend of the descendants of the chief of all the prophets, and also of the learned, an enemy of the infidels, a helper of the Muhammadans, and a defender of Islām, passed out of this world. His name was Alagh Khān Jahān. God be merciful to

him. He left this world for a better one on the night of Wednesday, 26th Zil Hijjah, and was buried on Thursday, the 27th of the same month in the year 863." Another inscription on the south side of the first terrace is—"We begin life in this world by crying; trials and hardships follow, while death ends all"; and there are two verses, of which the following translation has been given by Mr. Sunder:—

"Remember, O friends, death is certain, death is sure.
It is a thorn in the garden.
Death is certain, death is sure.
Death is the greatest enemy of all living things,
And is different from other enemies.
Death is certain, death is sure.
The accursed Satan is your enemy;
He tries to change your faith.
Be careful, be watchful.
Death is certain, death is sure.
In all communities the great forgive the faults of the weak;
And the poet well says—
Death is certain, death is sure."

To the west of the mausoleum is a mosque in which the saint is said to have spent a part of his last years in prayer; and between the two buildings is the tomb of Muhammad Tāhir, who is said to have been the *Dīwān* or Prime Minister of Khān Jahān. Some pious sentences are inscribed on it, and the following inscription is in Arabic characters:—"This tomb is a part of the garden of Heaven and of a great friend, by name Muhammad Tāhir, 863 Zil Hijjah." This Muhammad Tāhir was the Brāhman *Dīwān* of Khān Jahān and the founder of the sect of Pīr Alis, of whose conversion to Islām an account has been given in Chapter III.

Immediately to the south of Khān Jahān's mausoleum there is a large tank called the Thākur-dīghī, because an image of the god Siva is said to have been found in it. The image is now at a village called Sivabāri to the east of Bāgherhāt, and one of its arms bears the marks of a cut from a *kodāli*. ... contains a number of crocodiles, which are regularly fed by the *k...s* or custodians of the buildings. They are believed to be the ...ndants of two crocodiles kept by Khān Jahān, which were ...led Kālāpār and Dhalāpār, *i.e.* black side and white side. ...dition says that when Khānja Alī called them by their names, t... would come to him from the remotest corner of the tank, and ...heir descendants hear and obey the same call. They are quit... tame and will take fowls from the hands cf

pilgrims without attacking them. On the north-west side of the Thākur-dīghī there is a building, nearly as large as Khān Jahān's mausoleum, in which a *fakīr* named Ahmad Ālī, but also called Zindā Fakīr, was buried. The latter name, which means the living *fakīr*, is explained by a story that, when his body was being put in the tomb, he rose and called out to the mourners to bring his Korān. A mosque adjoining the tomb has been converted into a cow-shed.

The legend connected with these buildings of Khān Jahān is as follows. When Khān Jahān was old and near the end of his days, he asked God where he should go to die and be buried. God pointed out to him this place, and so he came here, erected a mosque and tomb for himself, and dug a tank, as he always did beside his buildings. In excavating this tank he dug very deep indeed, and yet failed to find any water. At last the diggers reached a Hindu temple, into which Khānja Alī entered. He found a devotee sitting inside, whom he asked for water. The devotee at once caused the fountains of the deep to gush forth in such abundance that it was with difficulty that Khānja Alī and the diggers escaped in time to the bank. The devotee's temple is believed still to exist at the bottom of the tank, but it has been seen only by one man, who was cutting the branches of a tree on the edge of the tank. Suddenly he cried out "There is the devotee walking"; and the moment he said so, the branch on which he stood snapped, and he fell down and died. His body was buried close by, within the precincts of the mosque. The legend of the tank is a curious one in one respect; it is a Muhammadan fable, though its subject is Hindu divinity.* An annual *melā* or fair is held on the grounds near the tomb of Khān Jahān upon the supposed anniversary of his death, the full moon of Chaitra (March-April). On this occasion Muhammadan women assemble in large numbers, and offer fowls to the crocodiles in the tank, in the belief that this offering will procure them offspring.

At a distance of 1½ miles from the road to Khān Jahān's tomb, there is another brick-laid road, also ascribed to Khān Jahān, leading to the building called Sātgumbaz. Proceeding along it a short distance, we reach a large gateway with a pointed arch, which is still perfect. Between this gateway and the east side of the Sātgumbaz, which faces it, are the remains of what was once a courtyard with a masonry floor, where people used to meet and perform their ablutions before entering the Sātgumbaz for prayers. The place is now neglected and covered with jungle.

* J. Westland, *Report on the District of Jessore*, p. 15.

The Sātgumbaz is a large oblong building built of chiselled bricks. It is 159 feet 8 inches long and 105 feet broad, while its height from the ground to the roof is 21 feet 7 inches. Inside, the length of the building is 143 feet 3 inches, and its breadth is 88 feet, the thickness of the walls on all sides being 8 feet. The roof is composed of 77 domes (eleven rows of seven) supported by arches on sixty pillars below; no less than twenty-one of the domes are more or less damaged, and there are cracks in the walls. The pillars are built of grey stone, and seem originally to have been encased in brick, five of them still having a brick casing. At the four corners of the building are four minarets, 30 feet in circumference and 13 feet above the level of the roof. The two to the east can be climbed by means of winding staircases from the inside of the building, one of them being called the *andha kothā* or dark building and the other the *raushan kothā* or light building. They were obviously intended for the use of the Muazzin, who went up them five times a day to sound the *azān*, *i.e.*, call the people to prayer.

The main entrance is to the east and is flanked by five smaller arched entrances on either side, while the northern and southern walls have each seven similar entrances. Looking straight west from the main entrance into the hall of the building along its central aisle, we face a large stone *mihrāb*, or prayer niche in the west wall of the structure, in which the *imām* or leader used to stand and lead the prayers. On either side of this *mihrāb* are five prayer niches, but a small door has been let through one of the latter. The local legend is that thieves dug into the niche and broke it in the hope of finding treasure. There are also twelve small niches in the north wall and twelve in the south wall. The arches of the doorways, and also those in the west wall containing the prayer niches, are ornamented with five small circles or rosettes, one in the centre and four round it (arranged thus ⁘), which are believed to represent the arms of the then reigning king of Bengal, Mahmūd Shāh, as the coins struck by this sovereign bear similar circles on them.

The name Sātgumbaz, *i.e.*, the mosque of 60 domes, may be due to the ordinary Indian predilection for round numbers, or it may be a corruption of Sātāttar-gumbaz, for the building has actually 77 domes and is sometimes called by that name. It has been said that the building was not a mosque, but a *darbār* hall built by Khān Jahān; but this story deserves as little credit as another tale of his treasure being deposited beneath the floor. The latter belief is, however, prevalent, and thieves have before

now dug into the pillars in the hope of finding treasure. The building was clearly intended to be a mosque. There are the usual prayer niches or *mihrābs* in the back wall to the west, a small door leads through the latter into the interior as in all larger mosques in India, and the style is in every respect that of a mosque, the only peculiarity being the large number of domes covering the roof. As a building it is of inferior workmanship as compared with the tomb of Khān Jahān. It has also suffered much from the effects of time, as well as from the dampness of the climate, and is generally in a bad state of repair. It is, however, a peculiar structure, and it has been decided to preserve it as a partial ruin, so as to show what it was like when complete.

To the north-west of the Sātgumbaz there is a very large tank called Ghorā-dīghī, which was excavated by order of Khān Jahān. He is said to have called it Ghorā-dīghī because he made it of the length that a horse ran without being tired. This tank also has a number of black crocodiles, which come to be fed as soon as called, the call being "Come Kālāpār (black side)," and "Come Dhalāpār (white side)." A little to the north of the Sātgumbaz there is a small mosque, now in ruins, and alongside it is a tank called the Bis-pukur or poison tank, from which no body will take water. It is said that one of the wives of Khān Jahān, called Sonā Bibi, took poison on his death, threw herself into the tank, and was there drowned. The other wife, named Bāghi Bibi, was buried on the west side of the Ghorā-dīghī; and a small mosque, which stands near her tomb, is named after her. There are numerous other mosques erected by Khān Jahān and his followers, who are said to have been no less than 360 in number. One of them is of rather large dimensions, with a broad tank facing it, and is said to have been built by one Saādat Khān, a disciple of the warrior saint. The ruins of a brick-built bridge remain to show that the stream which flows past this place, called the Magrā Nadī, was a large river four or five hundred years ago, when it was spanned by a substantial bridge. On the banks of this stream is a landing-place, or rather the ruins of one, designated Pātharer Ghāt.*

Bāgherhāt Subdivision.—Eastern subdivision of the district lying between 21° 44′ and 22° 59′ N., and between 89° 32′ and 89° 58′ E., with an area of 679 square miles, excluding the Sundarbans tract. It is bounded on the north by the districts

* For much of the above information I am indebted to a pamphlet by Mr. D. H. E. Sunder.

of Jessore and Farīdpur, on the east by the Madhumatī, which divides it from Backergunge, on the south by the Bay of Bengal, and on the west by the Khulnā subdivision. Its population was 363,041 in 1901, as against 340,559 in 1891, the density being 535 persons to the square mile. The subdivision contains 1,045 villages, but no towns. Its headquarters are at Bāgherhāt, and the chief trade centres are Morrellganj and Kachuā. For administrative purposes it is divided into the thānas of Bāgherhāt, Morrellganj, Mollāhāt and Rāmpāl.

Bardal.—A village in the Khulnā subdivision, situated on the Kabadak opposite Chāndkhāli. It contains one of the largest markets in the district, a much frequented *hāt* being held here every Sunday. It has now eclipsed Chāndkhāli on the opposite side of the river, which formerly was the most important marts of the Sundarbans. It is common to find vicissitudes of this kind in the fortunes of neighbouring *hāts*.

Chāndkhāli.—A village in Khulnā subdivision, situated in thāna Pāikgāchā on the Kabadak about 10 miles north of the place where that river enters the Sundarbans. The place is of some historical interest as being one of the first markets set up in the Sundarbans, and also the headquarters of what was practically the first subdivision established in Bengal, both being created by Mr. Henckell, Magistrate of Jessore, at the close of the 18th century. The route from the eastern districts to Calcutta then as now passed by Kachuā, Khulnā, Chāndkhāli, and by the river leading past Kālīganj; but this route was south of the cultivated tracts, and for the most part lay through uninhabited forest. In 1785-86, as part of his scheme for the reclamation of the Sundarbans, Mr. Henckell established, for boats passing through this inhospitable tract, three markets, where travellers might meet with traders and obtain provisions. One of these markets was at Chāndkhāli, the other two being at Kachuā and Henckellganj. Chāndkhāli also became the seat of a subdivision in 1786, when Mr. Henckell established what he called a "cutcherry of reference" for the trial of claims made by zamīndārs in respect to their boundaries. This he placed in charge of Mr. Foster, one of his assistants, who was also directed to take cognizance of civil and criminal matters arising within a radius of 30 miles from Chāndkhāli, except when they were of importance, when he was to refer them to Mr. Henckell himself. The brick building erected by Mr. Henckell to serve as a *kāchhāri* was in existence till 20 years ago, when it fell into the river; and the only memorial of Mr. Henckell now left is a tank attributed to him, whose

antiquity is attested by large banyan trees growing along three of its sides. Thirty years ago Chāndkhāli was still one of the leading marts of the Sundarbans, but it was gradually eclipsed by Sāheb's Hāt at Bardal on the other side of the river. The village contains a dispensary opened in 1899, and a cutcherry erected in 1907.

Chitalmāri.—A village in the Bāgherhāt subdivision, situated on the river Madhumatī. It has a bazar of considerable importance, and a large trade in cattle is carried on. It is the site of an annual fair held at the end of March, which lasts for six days and is attended by about 2,000 people daily.

Chuknagar.—A village situated in the Dumriā thāna of the Khulnā subdivision. It contains a District Board Inspection bungalow, and a large *hāt* is held twice a week. An annual fair takes place here in November or December after the Dumriā fair.

Damrail.—A village in the Sātkhirā subdivision, situated on the left bank of the river Kālindī, a few miles north-west of Iswarīpur. It contains a temple called the Navaratna, which must once have been a fine structure. It is now, however, in ruins, and of the nine *chūrās* or pinnacles which crowned it, eight have fallen down and only the central one, which was the biggest, is left. Its top is overgrown with jungle, but little damage has been done to the side walls, which are of solid masonry. The building has a circular room in the centre, the vault over which carries the highest pinnacle. On the four corners of this room there are four side rooms, which are enclosed within four outer walls. The four inner walls run parallel to the four outer ones and separate the central room from the side rooms. Over each of the four corners of the inner and outer walls there was a pinnacle, which, with the one over the central vault, made up the nine *chūrās*. The outer walls are engraved with figures of Hindu gods and goddesses. On the western wall there is an inscription, which is now so much effaced that only a few words can be read with great difficulty.

The Navaratna is said to have been built by Rājā Bikramāditya, the father of Pratāpāditya, some time during the third quarter of the 16th century. There is no idol within the Navaratna, and it is believed that the building was never dedicated to a god or goddess and never contained any image. It is said to have been built for a different object, viz., as a *samāj-mandir*. When Bikramāditya established himself in Khulnā, he induced many Brāhmans and Kāyasths of respectable families to come from various parts of Bengal and settle near his capital.

He established a *samāj* or assembly for the guidance of his subjects in social matters and styled himself its head. The assembly consisted of nine men, who, like the nine sages in the court of Mahārājā Bikramāditya of Ujjain, were called *navaratna*, or nine gems, and it was in the *samāj-mandir* that they used to meet for consultation. The name Navaratna is said to commemorate the fact that it was their meeting place; but the designation is a common one for Bengali temples with nine towers or pinnacles.

Daulatpur.—A village in the Khulnā subdivision, situated 5 miles north of Khulnā. Population (1901) 808. It contains a station on the Eastern Bengal State Railway, a *tahsīl kāchhāri* of the Saiyadpur Trust estate, a charitable dispensary (opened in 1866), a High English school, and an Arts college established a few years ago, which is called the Daulatpur Hindu Academy. A large trade in betel-nuts, molasses, jute and timber is carried on here.

Debhātā.—A town in the Sātkhirā subdivision, situated on the Jamunā river, 8 miles north-east of Kālīganj. Population (1901) 5,454. It was constituted a municipality in 1876, and the area within municipal limits is 3·3 square miles. The town contains a police outpost and a dispensary opened in 1907. There is a local trade in *sundrī* wood, and lime is manufactured from shells.

Dhūmghāt.—An old capital of Rājā Pratāpāditya, the site of which is disputed. The place now known as Dhūmghāt is situated in Sundarbans lot No. 165, about 3 miles from Iswarīpur. It is a big stretch of swampy paddy fields, with groups of cultivators' huts scattered here and there, and though it contains an old tank, there is no trace of any ruins. The general consensus of opinion is that this was not the old Dhūmghāt. According to some, the site of that city is now occupied by the village of Bansīpur, 2 or 3 miles distant from Iswarīpur, where there are some remains of old masonry structures. According to others, Dhūmghāt was in Sundarbans lot No. 169, which is a Government reserve forest, known locally as the Tīrkāti jungle, about 10 or 12 miles from Iswarīpur. The remains reported to be still extant at this place are some old masonry ruins, including a dilapidated *math*, about 25 feet high, resembling a temple in architecture, a tank, the remains of a *pākā* road, and several garden trees, which do not ordinarily grow in the Sundarbans, such as *bakul*, *gāb*, etc.*

*I am indebted to Bābu Chāru Chandra Chatterji, Subdivisional Officer of Sātkhirā, for the above information.

Dumriā or Dumuriā.—A village in the Khulnā subdivision, situated 21 miles (by river) east of Khulnā. Population (1901) 3,847. It is the headquarters of a thāna, and also contains a sub-registry office and a dispensary opened in 1904, which is called the Satīsh Chandra Mukherji dispensary after a former Collector. An extensive trade is carried on in rice and sugar, and also in boats, which are built here. A fair is held during the Rāsjātrā festival in October or November.

Fakīrhāt.—A village in the Bāgherhāt subdivision, situated nearly half way between Khulnā and Bāgherhāt. It contains a police outpost and inspection bungalow, but was formerly of much more importance than at present. It has still a large bazar, however, and carries on a considerable trade in rice, betel-nuts, coconuts and sugar. The land at Fakīrhāt is exceptionally high for the Sundarbans, and grows date trees to a certain extent. Sugar is manufactured from the produce of these trees, and also from molasses (*gur*) imported from other districts.

Gopālpur.—A village in the Sātkhirā subdivision, situated 3 miles from Iswarīpur. It contains a temple said to have been one of four erected by Pratāpāditya. These temples stood at right angles to each other, enclosing a rectangular space on the right bank of the river Jamunā, which has now silted up. Those on the southern, western and northern sides have fallen down and are a heap of ruins, and the one on the eastern side is the only one now standing, but the upper storey even of this temple has fallen down. The lower storey is in the form of an oblong, with a staircase inside; and the walls are engraved with images of Hindu gods and goddesses. There was a *Dol-mandir* in front of the temple, which has also fallen down. Altogether, the temple is in a very dilapidated condition; it is overgrown with jungle and is the haunt of bats and wild pig. The idol of Gobinda said to have been brought by Pratāpāditya from Purī, was formerly enshrined in the upper storey, but it was removed over a hundred years ago and is now in the house of the *adhikarī* or hereditary priest at Raipur. Once a year, at the time of the Dol festival in February, it is taken to village Nunnagar, which contains the residence of some descendants of Pratāpāditya, who hold a high social position among the Bangaj Kāyasths of Bengal. At a short distance from the temple there is a big tank about 100 *bighās* in area, which, according to tradition, was dug by Pratāpāditya. It was apparently a magnificent sheet of water at one time, but at present is overgrown with weeds.

Iswarīpur.—A village in the Sātkhirā subdivision, situated 12½ miles south of Kālīganj on the Jamunā river, close to its

junction with the Ichhāmatī. Population (1901) 362. Historically, Iswarīpur is one of the most interesting places in the district, for it was the capital of Bikramāditya in the latter half of the 16th century. It was also known as Yasohara, a name which means either supremely glorious or the depriver of glory, the legend being that the treasure taken here from Gaur by Bikramāditya was so great, that thenceforth that great city was eclipsed by the city in the Sundarbans. The latter name, abbreviated to Jasor, was extended to the adjoining country, and was eventually given to the present town of Jessore. The former name is said to be due to the fact that Pratāpāditya, the son of Bikramāditya, built here a great temple dedicated to Kālī; and there is still a temple in the village, called the temple of Jasoreswarī, which contains an image of the goddess.

The most important remains extant are an old fort and the buildings known as the Tenga Masjid, Hāfizkhānā and Bāradwārī. The fort is a large enclosure surrounded by immense embankments, a little south of the junction of the Jamunā and Ichhāmatī. Some say that it was a tank, but this theory is improbable, for there are no less than sixteen tanks round about the enclosure, and a further supply of water could not have been necessary. Whether tank or fort, its former glory has departed, for the cultivator has turned up the soil and planted it with paddy. Practically the only remains are a moat connected with the old channel of the Jamunā river and high mud ramparts enclosing a large quadrangular space. The ramparts now serve as house sites and gardens, and the enclosed space as rice fields. Stone balls, sometimes covered with iron plates, are found now and then by cultivators in the fields, and in one part of the ramparts heaps of refuse iron are met with, which indicate that something like an iron foundry may have existed and confirm the local tradition that guns were made here. South of this fort is a large mosque called Tenga Masjid. It is built of solid masonry and is 140 feet in length by 35 feet broad, the height of the domes, of which there are five, measured on the inside, being 35 feet. The building appears to have sunk a good deal, and the domes are cracked, but it is still an imposing structure and is used regularly as a mosque by the local Muhammadans.

On the north-east of the fort are the remains of a building called Bāradwārī, which is said to have been Pratāpāditya's hall of audience. In front of it is a tank which must formerly have been a fine sheet of water. Another building is called

the Hāfizkhānā or jail. This also was a fine brick building, and the roof is still intact in spite of the neglect of centuries and the ravages of the damp climate. Tradition says that it was originally three stories high, and that two have now sunk below the surface of the ground. The name Hāfizkhānā appears to be a misnomer, for the building is obviously a *hamāmkhānā* or bath. There are marks of pipes passing through the walls, and reservoirs for water, which clearly show that it could not be anything else but a Turkish bath. South-east of the fort are the ruins of what is generally believed to have been the palace of the Rājā. Now there is only a high homestead site, called the *Rājbāri-bhitā* by the villagers, with remains of old bricks and a long compound wall along the village road.

At a little distance to the east of Tenga Masjid, the Rājā's tutelary deity, the goddess Kālī, is enshrined in a building that has been kept in good repair. In former times, it is said, she looked southward and the lands on the south were cleared; but the Rājā offended her, and one day when he went to prostrate himself before her, she turned her face in displeasure to the west. Hence the lands on the west are still clear, but on the south they have been under jungle ever since the goddess turned from Pratāpāditya and his glory departed. The shrine is not a temple of the usual shape, but a rectangular building, like an ordinary *pūjā-bāri*, with a spacious quadrangle in front, enclosed by long rows of rooms, one of which is double-storied. None of these buildings are ancient, having been erected about 100 years ago by the *adhikāris* or priests of Jasoreswarī. There are two tablets, one in Sanskrit and another in the vernacular, to this effect. The tradition is that the present shrine remained without a roof till the piece of iron that was on the top of the original temple was found among the ruins and removed to it. The site of the ancient temple of Jasoreswarī is pointed out at a short distance from the present building. Here remains of old masonry work are still visible.

There are a few minor remains in and about the village. At a short distance from the Tenga mosque is a small rectangular building now overgrown with jungle, which is said to have been a temple of Siva erected by Mān Singh after the defeat of Pratāpāditya. In front of the mosque are some hollows covered with ruins, which, according to some, are the graves of Muhammadan generals defeated by Pratāpāditya, while others declare that they mark the site of underground magazines. Another high mound, now overgrown with trees and strewn with brick remains, commands an old channel of the Jamuna.

The Ichhāmatī, which nearly surrounds the old town of Jasor Iswarīpur, was once a large flowing stream. It is so represented in Rennell's atlas, but it has now silted up towards the north and is impassable for any but small boats. South and east of Iswarīpur are the debris of old buildings, and the place is called Tīrkāti. On the opposite side of the Ichhāmatī a large area is strewn over with bricks and the foundations of old buildings. This place goes by the name of Tezkāti. These names were probably given with reference to the rapidity with which the clearings were effected. *Tīr* signifies an arrow, and *tez* means swift; and the names would mean cut with the speed of an arrow and cut quickly.*

Jātrāpur.—A village and market in the Bāgherhāt subdivision, situated midway between Fakīrhāt and Bāgherhāt. The village is of considerable size and has an extensive trade in betel-nuts and coconuts. It is chiefly notable for a large temple of the Vaishnava sect dedicated to Gopāl, which was erected about three generations ago, by a Vaishnava Bābājī named Ballabh Dās. The wealth which he employed to raise and endow the temple was acquired by begging; but his followers attribute to him miraculous powers, because after coming to the country a penniless beggar, he managed to build a fine temple to his god. To this temple of Gopāl, therefore, a new temple has been added, dedicated to the Bābājī, which was built by his followers upon the spot where he was buried. The temples are frequently visited by pilgrims, who make journeys of even three to four days in order to visit them.

Kachuā.—A village in the Bāgherhāt subdivision, situated at the junction of the Bhairab and Madhumatī rivers, about 6 miles east of Bāgherhāt. It contains a police outpost, a sub-registry office and a considerable bazar. It owes its foundation to Mr. Henckell, being one of the three market-places which, as related in Chapter II, were established in the Sundarbans by him towards the close of the 18th century. A creek or *khāl* divides the village into two parts, and is crossed by a masonry bridge, built, according to a rude inscription, by one Bansī Kundu, who also erected a small temple close by. Large quantities of *kachu*, a kind of yam, are grown here, from which circumstance the village probably derives its name.

Kalāroā.—A village in the Sātkhirā subdivision, situated on the Betnā, 12 miles north of Sātkhirā. It contains a police

* *Antiquities of the Sundarbans*, Statistical Reporter, 1876. I am also indebted to Bābu Chāru Chandra Chatterji, Subdivisional Officer of Sātkhirā, for information regarding the remains at Iswarīpur.

station, sub-registry office, inspection bungalow, and a dispensary, which was established in 1896. It has a fairly large bazar, the principal trade being in molasses, sugar and rice. Kalāroā was formerly a municipality, but ceased to be so before the formation of the district.

Kālīganj.—A village in the Sātkhirā subdivision, situated on the Kānksiāli river, 32 miles (by river) south-west from Sātkhirā. The Jamunā used to flow by the village, but the channel to the south has silted up. It contains a police station, sub-registry office, inspection bungalow, and a dispensary, which was opened in 1897 and is known as the Vincent dispensary after a former Collector. The village lies on the boat route between Calcutta and Eastern Bengal, and has a large bazar and a considerable local trade. It is also noted for its manufacture of earthenware pottery, cutlery and articles made of horn. It was formerly the headquarters of a municipal union of villages.

Kapilmuni.—A village in the Khulnā subdivision, situated 6 miles south of Tālā on the banks of the Kabadak river; it is connected with Jhingergāchā railway station on the Eastern Bengal State Railway by a steamer service. It has a fairly large bazar, and a market is held twice a week on Sundays and Thursdays. It is not a place of any considerable trade, but it is the headquarters of three zamīndāri *tahsīls;* and a large fair (*melā*) is annually held here, which lasts for 13 days and is attended by 6,000 to 7,000 people. The place derives its name from a Hindu sage (*muni*) named Kapil, who is said to have taken up his abode here in ancient times, probably when it was still a dense forest, and to have established the worship of the goddess Kapileswarī. This sage is not the great Kapil, who, according to Hindu mythology, destroyed the sons of Sagar; and beyond the fact that he was a devotee who installed the idol of his goddess, nothing is known of him. His memory is still preserved however by the annual *melā* above referred to, which is held on Bāruni day in March, as that, it is said, was the day on which Kapil's prayers were accepted in heaven. The *melā* is a great bathing festival, for, according to local belief, the Kabadak at this place, and for that day, acquires the sanctity of the Ganges, a result due to the virtue of Kapilmuni or Kapileswarī. The old temple of Kapileswarī fell down long ago, and a new one built about 1850 by the lessee of the place, Mr. Mackenzie of Jhingergāchā, shared the same fate, being demolished by the cyclone of 1867. The goddess is at present enshrined in a thatched hut. The village also contains the tomb of a Muhammadan

saint Jāfar Alī, which is a place of pilgrimage for devout Musalmāns. It is covered with a thatched roof and is in charge of some *fakīrs*, who have grants of land for its support.

As regards the history of the place and of other ruins in the neighbourhood. the following extract is quoted from Sir James Westland's Report:—"More about Kapilmuni is not known, and the absence of tradition is probably due to the fact that these places have not been continuously inhabited, except in modern times. When, a hundred years ago, advancing civilization reached this point, the place and the sage were new to the new settlers, and they have handed down to their posterity only the little tradition they picked up themselves.

"In some other ruins near here there is evidence of this want of continuity of habitation. At a place called Agrā, a mile away, there are two or three mounds. One of these has been excavated and found to cover some ancient brick houses, the walls and windows of which are easily seen by descending into the excavation. There is not a doubt that the other mounds contain the same sort of ruins. I am informed that these mounds exist not only here, but at intervals all the way between Tālā on the north and Chāndkhāli on the south, a distance of some fourteen miles. How old these mounds are, and when the houses they cover were inhabited, it is impossible to say. The house I saw was only about the size of a well-to-do husbandman's dwelling; but for all I know, there may be some larger. There are some hollows, the apparent remains of tanks that once existed near the houses, but there is no mark of wall or ditch round the mounds that I examined. Of the inhabitants of the dwellings that once existed here, there is at present not even a tradition. They were not unlikely some ancient settlers in the place, who had dissappeared with all their work before the present race came into this part of the land. The present race dates from about a hundred years back, and the older race must therefore have dwelt in the place and disappeared long before that."

Katipārā.—A village in the Khulnā subdivision situated 10 miles north of Chāndkhāli on the Kabadak. This village appears to have been one of the early outposts of advancing reclamation. The leading family in it is a Kāyasth family of Ghoses, who migrated here from Khalishākhāli to the north-west about a hundred years ago, or at least at a time when the land was mostly jungle. This family brought to the village other Kāyasth families, with which they intermarried, and there is now a large Kāyasth community. The rest of the inhabitants are engaged in cultivation either in the vicinity or in the Sundarbans. The

village is a good specimen of a village, for the houses are for the most part well kept, and the village roads are wide and are maintained in fair order.

Khulnā.—Headquarters of the district, situated at the point where the Bhairab river meets the Sundarbans in 22° 49′ N. and 89° 34′ E. Khulnā may be described as the capital of the Sundarbans and has been for more than 100 years a place of commercial importance. It was the headquarters of the Raimangal Agency of the Salt Department during the period of the East India Company's salt manufacture in the Sundarbans, the offices being apparently at Bāghmārā on the east of the Rūpsā opposite the civil station. It is the only place in the district containing a thāna existing from before the Permanent Settlement, for it was the site of thāna Nawābād (meaning the new clearance), which is known to have been in existence in 1781 and has continued, with a change of name, up to the present time. In 1842 Khulnā was made the headquarters of a subdivision, the first established in Bengal under the present system. "Its chief object", according to Sir James Westland, "was to hold in check Mr. Rainey, who had purchased a zamīndāri in the vicinity and resided at Nihalpur, and who did not seem inclined to acknowledge the restraints of law." The first Subdivisional Officer was Mr. Shore, whose jurisdiction extended over not only the Khulnā subdivision, but also over almost the whole of the Bāgherhāt subdivision. Subsequently, in 1882, it was made the headquarters of the newly created district.

Khulnā is the chief centre for the Sundarbans trade, for not only is it the terminus of the central section of the Eastern Bengal State Railway, but all the great river routes converge on the town. It is connected by steamer with Nārāyanganj, Barisāl, Mādārīpur, Muhammadpur, Narāil and Binodpur, and all the boat traffic from and to the east passes through it. Apart, moreover, from this through traffic, Khulnā is a large forwarding mart. Rice, sugar, betel-nuts and coconuts, the produce of the vicinity, are collected for exportation and the trade in salt is also considerable. The railway station is being gradually extended so as to accommodate a large number of goods-sheds in order to deal with goods traffic on the Eastern Bengal State Railway.

The town itself has few features of interest. It contains the usual civil, criminal and revenue courts and offices found in the headquarters of a district, the office of the Divisional Officer of the Sundarbans Forest Division, the district jail, a circuit house, a dāk bungalow, and a hospital erected in 1901

and called the Woodburn Hospital after the then Lieutenant-Governor of Bengal, Sir John Woodburn, K. C. S. I. A zenāna cottage ward named after Mrs. Collin, the wife of the Commissioner of the Division, has also recently been opened. Among educational institutions may be mentioned a Government Entrance school, a girls' school, named after Dr. K. D. Ghose, formerly Civil Medical Officer of the district, the Khulnā Coronation Technical school and a Middle English school. There are also a Coronation Hall, a Town Hall and a public library located in the same building. In the heart of the town there is a large reserved tank, which supplies the town with drinking water. The town is fortunate in having a supply of filtered water, the water works providing 15,000 gallons per diem delivered into 5 reservoirs. The water is raised from the reserved tank into two sand filters, by means of a pulsometer pump, in 6 hours. It then goes through pipes to the distributing reservoirs, from which the people draw their water. The works were opened in 1906. Close to the railway station, and adjoining the Jessore road, there is another large tank named after the first district Magistrate of Khulnā, Mr. Clay. The bazar is called the Sāheber Bazar after a Mr. Challett, who had an indigo factory close by more than half a century ago. The place was formerly called Charliganj after the same gentleman, but the name has fallen into disuse. The population of the town, according to the census of 1901, is 10,426, and the area within municipal limits is 4·64 square miles comprising the villages of Khulnā, Baniākhāmār, Tutpārā, Bairā and Shibbāti.

Local tradition states that the town is called after Khullanā, a heroine of Hindu mythology, to whom an interesting legend attaches. It is said that Chandī, another form of Durgā or Kālī, was anxious to extend her worship on earth, and for this purpose had a celestial nymph named Ratnamālā born as a mortal, promising to watch over her while she devoted herself to the task laid upon her. Ratnamā[...] was born as Khullanā, and in due time became the second w[...]n th[...] a rich merchant of Ujjain, named Dhanapati Saudāgar. [...]ali on th[...] wife, Lahanā, was somewhat of a termagant, and dr[...] the early ou[...]ce of Dhanapati forced Khullanā to tend the fa[...]ily in it is a h[...] she did, until Chandī, taking pity on her, ap[...]rom Khalishākhāli [...]o Dhanapati and told him to return. Furth[...]go, or at least at [...] when Dhanapati performed the annual sr[...] This family brought t[...]is castemen were assembled together. T[...] which they intermarried, in his house because his wife had been [...]unity. The rest of the in the jungle. But Khullanā got him [...]her in the vicinity or in successfully undergoing

various ordeals to prove her fidelity. Dhanapati after this went to Ceylon in pursuit of his merchant's calling, and on the way his disrespect for Chandī was punished by a storm in which all his ships but one sunk, and when he reached Ceylon he was imprisoned. In the meantime, Khullanā gave birth to a son named Srīmanta, who was really a celestial musician, named Mālākar, born in human form. The latter, when he attained manhood, went in search of his father, and rescued him from captivity. In the end, the allotted time of Ratnamālā and Mālākar on earth having ended, they ascended to heaven in a celestial car.

Local tradition asserts that Khullanā dedicated to Kālī a shrine called the temple of Khullaneswarī on the bank of the river Bhairab at Tālimpur about a mile to the east of the present town of Khulnā. From this circumstance the town, which is situated at the junction of the rivers Rūpsā and Bhairab, derived its name; for it was formerly connected with Tālimpur, the Rūpsā, which now separates the two places, being even a century ago a small *khāl* or creek which could be easily forded. There is still a temple of Khullaneswarī, but the present temple is a modern one, built after the original site had been washed away by the river about the year 1880. The original home of Khullanā is said to have been at Kapilmuni, a village on the river Kabadak about 37 miles to the south-west of Khulnā, near which are a bridge and a *khāl* called Khullanā bridge and Khullanā *khāl*.

Khulnā Subdivision.—Headquarters subdivision of the district, lying between 21° 41′ and 23° 1′ N. and between 89° 14′ and 89° 45′ E. It extends over 649 square miles, excluding the Sunderbans tract, and is bounded on the north by Jessore, on the west of the Sātkhirā subdivision, on the south by the Bay of Bengal, and on the east by the Bāgherhāt subdivision, from which it is separated by the Athārabānkā, Rūpsā, Passur and Marjatā rivers. Its population was 401,785 in 1901, as against 341,493 in 1891, its density being 619 persons to the square mile. It contains one town Khulnā, its headquarters, and 929 villages. Khulnā is the chief centre of trade, but Alāipur, Daulatpur, Dumriā, Phultalā and Kapilmuni are also important marts. The subdivision, which was constituted in 1842, was the first established in Bengal and formerly included almost the whole of the present Bāgherhāt subdivision. For administrative purposes it is divided into four thānas, viz., Khulnā, Baitāghātā, Dumriā, and Pāikgāchā, and two outposts at Phultalā and Dākupi; the latter have been declared thānas for purposes of investigation.

Labsā.—A village in the Sātkhirā subdivision, situated about 2 miles from Sātkhirā, on the right bank of the river Betnā. The population is chiefly Muhammadan, and includes some families held in great respect by the Muhammadan community. The village is better known for a mausoleum called Mai Champa *Dargāh*, a strong masonry structure crowned by a big dome, in the centre of which is the tomb of Mai Champa or Champa Bībī. The *dargāh* is regarded as a place of much sanctity and is visited by a large number of Muhammadans and Hindus from the neighbourhood. There are several traditions current as to its origin. The most popular version is that Champa Bībī was a virgin saint belonging to the house of the Khalīfa of Baghdād, who came to India, over a century ago, to propagate the faith of Islām. After visiting different parts of the country, she came to Bengal and was wrecked off Labsā, while passing in a boat down the Naukhāli river, which was then one of the many channels forming the delta of the Sundarbans, but has now entirely silted up. Champa Bībī and her disciples escaped, but after this unpleasant experience, she settled in this village, where she lived the life of a devotee and eventually died. After her death her disciples erected the mausoleum now standing. It is somewhat curious that a virgin lady should be called "Mai," and both "Mai" and "Champa" are Hindu words which would scarcely be applied to a lady from Baghdād.

Another version is that some hundred years ago a holy *fakīr*, who had great influence with the Muhammadan rulers of the country, lived here. A neighbouring Hindu Rājā having fallen into disfavour with the latter, sought the assistance of the *fakīr*, and in return for his help promised to comply with any request he might make. Some time after this, when the Rājā celebrated the marriage of his only daughter, a girl of rare beauty and accomplishments, the *fakīr* appeared and to the horror of the Rājā reminded him of his promise and demanded the hand of the princess. The Rājā and his people having failed to dissuade the *fakīr*, at last took up arms; and in the fighting that ensued between the Hindus and the disciples of the *fakīr*, the Rājā perished with all his family except the princess. The *fakīr* then took her and married her according to the rites of his faith, and died shortly after. The princess, who was named Champa Bībī, passed the remainder of her life as a Muhammadan devotee; and on her death this tomb was erected by the large circle of disciples who had gathered round her.

Māgurā.—A village in the Sātkhirā subdivision, situated on the river Kabadak, 16 miles (by road) east of Satkhirā. It contains a police station and a sub-registry office.

Mansā.—A village in the Bāgherhāt subdivision, situated on the Mansā and Alāipur Canal. It was formerly an important centre of the trade in rice and jute, but it is on the decline owing to the silting up of the canal, along which large boats with cargo can now only pass at high tide. Formerly this canal was the shortest and most important boat route between Eastern Bengal and Calcutta, and hundreds of big country boats laden with rice, jute, etc., used to pass daily along it; but now there is hardly depth of water enough for big country boats, except during the rainy season and at flood tide, though it has been re-excavated. The village contains an inspection bungalow of the Public Works Department and a temple of Kālī, which is visited by numbers of pilgrims.

Masjidkur.—A village in the Khulnā subdivision, situated on the Kabadak river, 6 miles south of Chāndkhāli. The village derives its name from the fact that when the pioneers of cultivation in the Sundarbans were clearing jungle here, they came upon an old mosque close to the river bank and therefore called the place Masjidkur, *i.e.*, the digging out of the mosque. "The building thus found," writes Sir James Westland, "proclaims at the first glance that it owes its origin to the same hand which built the Sātgumbaz. The principle of structure is the same, only instead of a breadth of eleven domes and a depth of seven, we have here a breadth and depth of three domes only, or nine in all. There are the same massive walls, for they are about six feet thick; a large central doorway is beneath the middle dome on each side, and two smaller doorways on each face, one on each side of the central one. But the building itself appears to the eye of so massive a structure, that the doorways seem dwarfed out of all proportion to the size of the face. As in the Sātgumbaz, so here also there are four towers at the four corners of the buildings, but none of them appear to be ascendible; and the walls show in several places the same little circlets traced on the face of the brick which are used to ornament the larger structure near Baghahat." These circlets represent the arms of Mahmūd Shāh, king of Bengal in the latter half of the 15th century. The roof is supported by four pillars and there are three *mihrābs* or prayer niches on the western wall. One of the pillars has a smooth polish about half way up, which, enquiry shews, is due to its being constantly rubbed from superstitious motives. The pillars are made of stone and, like the Sātgumbaz pillars, are formed by placing two or three long stones perpendicularly in line, but they show none of the same regularity. Instead of rising out of the ground upon symmetrical bases, they rest

upon one or two similar long stones laid horizontally upon the ground, without regularity, and not even at the same height. Most of the stones are of the same grey stone as at the Sātgumbaz, but there are one or two of a redder colour, and one or two speckled stones among them. It seems certain that these stones were not brought here or fashioned for the purpose they at present fulfil. They belonged to some other structure, and they were taken from it, or from its ruins, to form pillars in this mosque. The mosque is still used as a place of worship.

Mollāhāt.—A village in the Bāgherhāt subdivision, situated 5 miles from the Mānikdaha steamer station of the Khulnā-Nārāyanganj Mail Service. It contains a police station, a sub-registry office and a dispensary opened in 1898.

Morrellganj.—A village in the Bāgherhāt subdivision, situated on the Pānguchī $2\frac{1}{2}$ miles above its confluence with the Baleswar or Haringhātā. It owes its foundation to Messrs. Morrell, who purchased the estate, then a dense forest, in 1849. The neighbourhood was quickly converted from jungle into a prosperous rice-growing tract, and on the banks of the river they established a market town called after themselves Morrellganj. Formerly the village was known as Sarāliyā. Here they built a good brick house for themselves, and as the mart soon became the most important in this part of the country, a police station, sub-registry office and dispensary were located there. On the death of Mr. Robert Morrell the management deteriorated, and the estate was sold to Mahārājā Durgā Charan Law, C.I.E.

The change effected before the sale of the estate is described as follows by Sir James Westland in his Report on Jessore (1874):—"Where thirty years ago there were miles of impenetrable jungle coming down to the water's edge and forbidding all access to the land, the country is now covered with rice fields and dotted with prosperous villages, with Morrellganj in the middle of all, a busy place of trade, and becoming more and more important every day. The whole work is due to the Messrs. Morrell, who, beginning with small beginnings, have now extended, and are still continuing to extend, their cultivation over a wide area. Their residence, which, in such unsure foundationless ground, it took some years of patient labour to erect, stands on the bank of the river at Morrellganj, which of course is named after them; and half a mile north of it, at the confluence of three rivers and a *khāl* besides, is the village and bazar of Morrellganj. Morrellganj has thus a great advantage in its position; for not only is it the natural centre of all the country round it, but it also lies directly upon the route by which most of the produce of the

eastern districts finds its way to Calcutta. The deep channel of the Pānguchī river affords a harbour for sea-going vessels, which now can reach it by the Baleswar river. The Messrs. Morrell have had the place declared a port, and more than one vessel has already taken cargo from it. So great are the natural advantages of the situation, that I feel sure there is a great future in store for the place."

These hopes have not been fulfilled, for though in 1869 the river here was declared a port by the Government of Bengal, and buoys were laid down, the efforts to make it an entrepôt for sea-going trade were not attended with success. Still the position of Morrellganj on a fine navigable river, commanding a rich rice country, renders the place a centre of local trade, and it is an important steamer station of the Cāchār-Sundarbans service. The river, which is tidal, is about a quarter of mile broad here, with deep water from bank to bank. The village has a population, according to the census of 1901, of 972 persons, and contains a police station, sub-registry office and a dispensary, which is maintained by Mahārāj Kumār Rishī Kesh Law.

Nawapārā Manighar.—A village in the Kālaroā thāna of the Sātkhirā subdivision. It contains the remains of a mud-built fort or rampart and entrenchment, and several large and small tanks, attributed to a Rājā who was originally a fisherman of the Tiyar caste. Legend relates that, once upon a time, while he was plying his fishing-boat, a hermit or Sannyāsī asked him to take him across a *bil* or a large sheet of water. The fisherman consented, and when they were in mid-stream, something in the holy man's *jholā* or wallet came into contact with an iron part of the boat, and at once turned it into gold. The Tiyar fisherman, seeing that the wallet of the Sannyāsī contained the *paraspāthar*, snatched it away from the hermit, and threw him overboard into the channel. While the holy man was being cast into the water, however, he cursed his murderer, foretelling that he too would die the same death with his whole family and that his line would become extinct. This was a terrible curse, for to die without children is the greatest calamity that can befall a Hindu. The Tiyar became a great Rājā. The revenue, which he used to receive from his tenants, consisted of old ploughs, spades, scythes and sickles, all of iron, which he used to convert into pure gold. He had a large family, and built a fort and entrenchments, and excavated 126 tanks. After enjoying his power for a short time, he was summoned by the Nawāb to give an account of his conduct. Fearing that he might be killed for his misdeeds and his family dishonoured, he took a pair of

carrier-pigeons telling his family that, if he let the pigeons fly homewards, it would be a sure sign of his death and of their disgrace. The Rājā was honourably acquitted, but, while he was riding home, the pigeons escaped. His wife and childern, on seeing them, rushed into a boat, and having closed the cabin, and made a hole in the bottom, drowned themselves. The Rājā, who arrived soon after, also drowned himself, and the curse of the hermit was thus fulfilled. The tank in which they were drowned is called *bara-pukur*, *i.e.*, the big tank.

The village is also called Garhdānī, *i.e.*, an elevated place containing a *garh* or fort, *dānī* or *dāngā* meaning an elevated place. The particular spot containing the fort is sometimes called Dānā-Manighar or Dhanpotār Dānā, a term implying buried treasure. It is said that until lately no two ploughmen could be seen ploughing together where the Tiyar Rājā's fort is situated, lest there should be a quarrel about the unearthed treasure which is believed to exist there.*

Pāikgāchā.—A village in the Khulnā subdivision, situated on the boat route of the Calcutta and Eastern Canals, 34 miles south-west of Khulnā. It contains a police station, a sub-registry office and a dispensary opened in 1907.

Pātkelghātā.—A village in the Sātkhirā subdivision, situated on the river Kabadak, 7 miles north-east of Sātkhirā. It contains a District Board bungalow and has a large market, the principal trade being in sugar. Opposite Pātkelghātā on the other side of the river is a large village called Kumuriā, which is at present in a deserted condition, but was at one time a great seat of learning, inhabited by many high caste Brāhmans and Kāyasths. It is claimed, indeed, that it ranked second only to Nabadwīp in this respect.

Phultalā.—A village and police outpost in the Khulnā subdivision, situated 11 miles north of Khulnā on the bank of the Bhairab. Population (1901) 3,911. It has a brisk sugar manufacture and contains a large bazar, with an extensive trade in rice, betel leaves, etc., especially in the former, which is imported from Nalchiti in Backergunge. Phultalā is a station on the Eastern Bengal State Railway, and is also connected with Khulnā and Jessore by a good road, known as the Jessore road. Near Phultalā there are several villages containing families of Pirali Brāhmans. There is an inspection bungalow at Sikirhāt, 3 miles from the railway station.

* The above account is derived from an article *The tradition of the Tiyar Raja* by Maulvi Abdul Wali, published in the Journal of the Asiatic Society of Bengal, Part III, 1899.

Rāmpāl.—A village in the Bāgherhāt subdivision, situated 16 miles south of Bāgherhāt. It contains a police station, a sub-registry office and a dispensary opened in 1906.

Saiyadpur Trust Estate.—An estate extending over 262 square miles in the Khulnā and Jessore districts, so called because it consists chiefly of a four-annas share in *pargana* Saiyadpur. For the same reason it is also known as the "Chārāni" estate. Another name is the Mahal-i-Wakf, but the official name is the Saiyadpur Trust Estate.

The history of this estate is an interesting one. In the 18th century it formed part of the estate of the Rājās of Jessore or Chānchrā, which was divided into two shares, one comprising three-fourths (twelve annas) and the other a fourth (four annas) of the property. The latter fell to the lot of Rājā Syām Sundar Rai, who died without heirs in 1758. About this time the East India Company received from the Nawāb of Murshidābād a grant of land near Calcutta, and one of the zamīndārs whom he dispossessed in order to make the grant was a Mughal of his court named Salāh-ud-dīn Khān. The latter, representing that Syām Sundar had left no heirs to his property, requested that it might be made over to him in requital for the loss of his own land, and the Nawāb thereupon granted him the four-annas estate. When the Permanent Settlement was concluded, it was in the possession of his widow, Manu Jān Begam, a good business woman who brought it in safety through the critical period succeeding that settlement, and saved it from the dangers which overwhelmed other zamīndāris. On her death in 1803, Hājī Muhammad Mohsin succeded as her half-brother and sole heir.

In 1806 Hājī Muhammad Mohsin, who had no heirs, executed a *tauliatnāmā* or deed of appropriation of his properties, by which what is known as the Mohsin Fund was created. In this deed it is recited that in the testator's family from generation to generation certain charges had been incurred and usages observed in connection with the celebration of religious rites and festivals, and that, as he had no children by whom the performance of these pious duties could be performed, he desired to make provision for their continued discharge. He therefore made over specified property to two managers, with instructions that they should divide the net income into nine equal shares, two of which they should keep for their own use, three they should devote to the expenses of celebrating religious festivals and executing repairs in the Imāmbārā and burial-ground, while the remaining four shares should be spent in paying salaries and pensions according to a list attached. The bequest included the following properties :—

the zamīndārī of *pargana* Kismat Saiyadpur and Sobnāli, with the Imāmbārā building and the Imāmbārā bazar and *hāt* at Hooghly and the furniture of the Imāmbārā.

It appears from the proceedings of the Vice-President in Council, Persian Department, dated the 8th December 1826, and from the correspondence generally, that these salaries and pensions were payable to the officers and servants of the Imāmbārā, so that the whole endowment, as far as its purpose was specified, was for the support of that religious institution, with the ceremonies performed in it, and the persons employed in it. The founder added the provision that "the managers after me will exercise their discretion and authority either to continue or discontinue them (the allowances and pensions) as they may think proper, and I have made over the management generally to them." No specific direction however was given as to what use should be made of any savings which might accrue from the discontinuance of salaries or pensions under the power given by this last clause, the matter being thus left to the discretion of the managers. A year before the execution of this deed a suit had been instituted against Hājī Muhammad Mohsin by Mīrzā Bundah Ulla, claiming, under a pretended will, the lands which the former subsequently constituted an endowment. This suit was prosecuted from court to court up to the Privy Council, and lasted some thirty years, during the whole of which period it continued to be uncertain whether the endowment was valid or not.

Hājī Muhammad Mohsin died in 1813, and the managers whom he had appointed seem immediately to have entered upon a course of mismanagement and embezzlement. According to the finding of the Court of Sadar Dīwāni Adālat, the proper objects of the endowment were neglected, the Government revenue fell into arrears, while the income was spent on quarrels between the managers, bribes to the police and *āmins*, and gifts to the managers' relatives. Moreover, in order to increase their own profits at the expense of the trust, they forged a perpetual lease in their own favour and that of their relatives, purporting to have been executed by Hāji Muhammad Mohsin before the deed of foundation. The Board of Revenue interfered for the better government of the endowment under Regulation XIX of 1810, at first associating a Superintendent with the managers, then laying down rules for their control, and finally in 1817, as these milder measures had only made matters worse, dismissing the managers altogether. As their relatives were implicated with them in the frauds committed, a Government servant was appointed

to administer the endowment under the orders of the Board and Local Agents. From this time the institution has been practically controlled by Government.

The Board of Revenue in 1817 founded a *madrasa* at an annual cost of Rs. 6,000, payable out of the funds of the endowment. But the leading feature in the first twenty years of Government management was the growth of a considerable fund vested in Government securities. In 1821 the property was settled in *patnī* tenures, that is to say, subject to a quit-rent fixed in perpetuity, and about six lakhs of rupees were received on this account. But as the suit questioning the validity of the title was then pending in the Privy Council, it was made a condition that if that case were lost, and the new owner refused to confirm the *patnīs*, the purchase-money should be returned with interest. To meet this possible charge, the proceeds of the *patnī* sale were invested in Government securities, and, the interest being added as it accrued to the original principal, a capital sum of about 10 lakhs of rupees was accumulated.

In 1835, the law suits having then recently terminated, it was decided by the Government of India that three-ninths of the income from the zamīndāri should be assigned permanently for the current expenses of Imāmbārā, etc. Of the two-ninths of the income assigned to the *mutwalis*, one-ninth was assigned to the agent or *mutwali* appointed by Government, and the remaining one-ninth was to be available for general purposes of a beneficent nature. The four-ninths share of the zamīndāri income appropriated by Hājī Muhammad Mohsin to pensions and establishments was to remain liable to those charges, but when they lapsed, the income was to be added to the surplus fund appropriable to general purposes. There thus remained at the disposal of Government for general purposes of a beneficent nature, first, one-ninth of the annual income from the zamīndāri; second, the lapsed pensions, etc.; and, third, the entire amount accruing from the interest of the accumulated fund invested in Government promissory notes. It was decided that, after setting apart from this last-mentioned fund such amount as might be necessary to provide appropriate buildings, including the charge of rebuilding or repairing the Imāmbārā and other religious edifices, if it should be found necessary to renew these, the remainder should be considered as a Trust Fund, the interest of which, with other items specified, might be "appropriated to the purpose of education by the formation of a collegiate institution imparting instruction of all kinds in the higher departments of education."

After the passing of Act XX of 1863 a Committee was appointed under section 7 of that enactment for the supervision of the endowment assigned for religious uses. This Committee controls the expenditure of a contribution equal to three-ninths of the income directly derived from the original estate in the form of rents and an allowance of Rs. 750 a month in respect of the charge for establishment to be borne by the four-ninths share. The manager, who now deals only with the religious assignment, having no concern with the property generally, receives one-ninth. The remainder of the estate, including the whole of the interest on the accumulation, is held to be at the disposal of Government as successor to the managers appointed by the founder. This fund was originally applied to the foundation and support of a college at Hooghly, affiliated to the Calcutta University and open to members of all religious communities. To this arrangement the objection was raised that an institution almost exclusively frequented by Hindus was not the most suitable recipient of the income of a distinctively Muhammadan endowment, and accordingly the Government of Bengal, by a resolution, dated the 29th July 1873, decided that the fund should be used exclusively for the promotion of education among Muhammadans, the Hooghly College being maintained from other sources. It has since then been devoted with great discretion, and with the best results, to assisting the progress of Muhammadan education throughout Bengal by various means, such as the payment of a part of the fees of Muhammadan students at the University and at Zilā schools, the appointment of Persian teachers at the latter, the foundation of scholarships and hostels, etc.

Under the orders of the Board of Revenue the estate was managed by the Collector of Jessore as *ex-officio* Local Agent from 1816 to February 1884, when it was transferred to the new district of Khulnā. The area of the estate is 167,652 acres, *i.e.*, about 262 square miles; and the rental is Rs. 1,80,000, the cess demand Rs. 16,000, and the Government revenue Rs. 95,000. The property consists of three revenue-paying estates borne on the revenue-roll of Khulnā, viz., (1) Kismut *pargana* Saiyadpur; (2) Kismut *pargana* Sobnāli; and (3) Char Badronadī. Saiyadpur lies in the districts of Khulnā and Jessore and contains 446 *mauzās;* Sobnāli consists of parts of 7 *mauzās* and lies in the Khulnā district; it was originally *lākhirāj* but was resumed in 1829. Char Badronadī is a small resumed *char* in thāna Dumriā in Khulnā. The estate consists of 210 lots, of which 158 belong to *patnī* tenures, one to a farmed tenure and 47 to *khās* tenures.

Classified according to the amount of the rent demand there are 54 tenures under Rs. 500; 50 from Rs. 500 to Rs. 2,000; 13 from Rs. 2,000 to Rs. 4,000; and one above Rs. 4,000. These tenures were created about 1823 on the basis of three years previous collections after a general measurement and assessment. [*Report of the Muhammadan Educational Endowments Committee*, Calcutta, 1888.]

Sātkhirā.—Headquarters of the subdivision of the same name, situated in 22° 43′N. and 89° 5′ E. at a distance of 8 miles from the Pātkelghātā steamer station of the Khulnā-Nārāyanganj Mail Service. The town lies along the bank of a narrow *khāl* connecting the Betnā with the Kuchiāmor *bil* or marsh, which in its turn, drains through several *khāls* into the Ichhāmatī river. It has a population, according to the census of 1901, of 8,356 persons, and contains the usual subdivisional offices, Munsif's court, municipal offices, sub-jail, a District Board bungalow and a dispensary. The educational institutions are a girls' school and an Entrance school, the latter being supported by the local zamīndārs and also aided by Government. The town contains five Hindu temples, dedicated to the following gods and goddesses, Siva, Gobinda Deb, Mahākāl Bhairab, Ananda Mayī and Annapūrnā; they were constructed by Bābu Prān Nāth Chaudhri, the grand-father of the present local zamīndār. Of these temples that dedicated to Annapūrnā is considered the best specimen of architecture.

Regarding the climate of the town and the possibility of improving it, the Bengal Drainage Committee observed as follows in their report on the Presidency Division, published in 1907. "Although the figures of mortality only show an average annual death-rate from fever of 15 per mille (1901-05) in the Sātkhirā town, the local accounts are emphatic as to its unhealthiness, which it is hoped to remedy by creating a greater flow in the adjacent *khāl*. It has been suggested that this might be done either by throwing an embankment across the river Betnā just below the junction of the *khāl* with it on the north-east, thus diverting its waters into the *khāl*, or by introducing the water of the Ichhāmatī by a series of cuts from Chānduriā on the north-west. The whole scheme is very much in the air and requires elaboration. We are not disposed to approve of the sacrifice of the present channel of the Betnā south-east of Sātkhirā in the interests of that town; and as regards the alternative, all that seems known is that a previous enquiry feared the danger of inundation if the water of the Ichhāmatī was brought in. It is surmised that the risk no longer exists, but no levels have been

taken, and we are not prepared to accept that opinion. The simple deepening of the *khāl* stands as a project in the famine programme, but it is doubtful if this would have much effect upon health."

Sātkhirā Subdivision.—Western subdivision of the district lying between 21° 38′ and 22° 57′ N. and between 88° 54′ and 89° 23′ E. It has an area of 749 square miles, excluding the Sundarbans tract, and is bounded on the north by the district of Jessore; on the west by the 24-Parganas, from which it is separated by the Ichhāmatī, Sonai, Jamunā and Raimangal rivers; on the south by the Bay of Bengal; and on the east by the Khulnā subdivision, from which it is separated by the river Kabadak. The subdivision is an alluvial tract, cut up by large rivers, which are saline up to the point where the tides reach. These rivers run from north to south into the Bay of Bengal, and small *khāls* or creeks run from east to west and communicate with the *bils* and rivers. The land towards the north is comparatively high, the central portion is low-lying, and in the south are the Sundarbans. The population of the subdivision was 488,217 in 1901, as compared with 495,600 in 1891, the density being 652 persons to the square mile. It contains 1,467 villages and two towns, viz., Sātkhirā and Debhātā. For administrative purposes it is divided into five thānas, Sātkhirā, Asāsuni, Kalāroā, Kāliganj and Māgurā.

Senhātī.—A village in the Khulnā subdivision, situated 5 miles north of Khulnā. It is the headquarters of an Union Committee, and contains a dispensary opened in 1907 and a High English school. It also enjoys the reputation of being the home of the Kulin Baidyas or physicians of Eastern Bengal. Formerly there were some large sugar factories, but these have disappeared, and the place has lost much of its trade. The bazar is called Nimāi Rai's Bazar after a law agent (*mukhtār*) of that name in the service of Rānī Bhawānī of Nātor, a lady famous for her piety. Local tradition says that Nimāi Rai held a *tāluk* here under the Mughal Government and established the bazar on the land. There is a temple dedicated to Kālī, which was built by Rājā Srīkānta Rai, who was proprietor of the land till about 1797. Along the banks of the river there are two other shrines located in thatched huts—one dedicated to Sitalā, goddess of small-pox, and the other to Jwara Nārāyan, the god of fever.

The place is described as follows by Sir James Westland in his *Report on the District of Jessore*. "It forms with its suburbs the largest collection of houses in the district, and I think it may claim also to be the most jungly place in the whole district.

Old tanks filled with weeds and mud, and their sides covered with rank jungle, are everywhere scattered over it; and many unoccupied spaces within its limits, which anywhere else would be cultivated, are a mass of underwood. The roads and paths of the village, except one very fair one, which is kept in order, wind through passes of brushwood". It is a happy task to record the fact that this description no longer holds good, and that the village has improved considerably since it was written.

Sundarbans.—The southernmost portion of the Gangetic delta, situated between 21° 31′ and 22° 38′ N. and between 88° 5′ and 90° 28′ E., extending over an area of 6,526 square miles, of which 2,688 square miles lie in Khulnā, 2,941 square miles in the 24-Parganas and 897 square miles in Backergunge. This tract is bounded on the north by the permanently-settled lands of the 24-Parganas, Khulnā and Backergunge; on the east and west respectively by the estuaries of the Meghnā and Hooghly; and on the south by the Bay of Bengal. It has a length of about 170 miles along the sea face and stretches inland for a distance of from 60 to 80 miles.

Briefly, the Sundarbans may be described as a low flat alluvial plain in which the process of land-making is still going on, covered, where not under cultivation, with forests and swamps, intersected from north to south by wide tidal rivers or estuaries, and from west to east by narrow tidal rivers or creeks. All the estuaries, and most of the rivers, are salt; there is little or no current down them, and they are practically tidal watercourses. They are connected with each other by an intricate series of branches, and the latter in heir turn by innumerable channels; so that the whole tract is a tangled network of estuaries, rivers, and watercourses, which enclose a large number of islands of various shapes and sizes. These flat swampy islands are covered with dense forest, the most plentiful and important species being *sundrī* (*Heritiera littoralis*), which thrives most where the water in the channels is least brackish. Along the sea face the forest is almost exclusively composed of mangroves, which sometimes extend into tidal water, but elsewhere are separated from the sea by a line of low sand hills or dunes. The felling of trees for timber, planks, posts, and fuel, employs a class—not a caste, for they are both Hindus and Muhammadans—of professional woodcutters termed *banlīs*. They proceed in boats to certain localities in the forests called *gais*, each of which is presided over by a *fakīr*, who is supposed to possess the occult power of charming away tigers and who has undoubtedly some knowledge of wood-craft.

Here the wood-cutters work six days in each week, for one day in the week (but no particular day) is set apart for the worship of the sylvan deity presiding over that particular forest. The *fakīr*, who is supposed to have some personal knowledge of this supernatural personage and of his or her dislikes—for such deities are of either sex—acts as high priest on these occasions, and is readily remunerated for his services.

Cultivation is confined to the north, where reclamation has been effected with considerable difficulty. It is hard for any one who has not experienced the obstacles that must be encountered and overcome in an undertaking of this kind, to form any adequate idea of them. First of all the lands have to be embanked. For this purpose a line is cut through the forest along the banks of the stream, embankments are thrown along it, and strong dams are constructed across the mouths of the smaller streams to keep salt water out. This being done, the forest has to be cleared, tanks dug and huts constructed. Tigers sometimes put a stop to clearing operations, by killing the men employed on them; and cases have been known of tracts of land already under cultivation being abandoned, owing to tigers carrying off the cultivators while at work in their fields, and breaking into their houses at night, killing men, women, and children. Tigers are also very destructive to cattle, and great damage is done to the crops by sounders of wild pigs and herds of deer. Last, but not least, of the difficulties to be overcome is fever. When it prevails, numbers are laid up; their lands remain fallow, and before next season are overrun with reed jungle, which springs up directly the forest is cleared, unless the lands are immediately cultivated. This, when once it has established itself, is most difficult to eradicate, taking four or five years to kill.

To the south of the Sundarbans are numerous reefs extending from 18 miles to 30 miles out into the sea, with a curious depression called the "Swatch of no ground," which is described in the next article. The reefs consist of very hard ground, while the channels between them have a soft bottom with an increasing depth of water towards the land. A stiff sloping bank extends from the land sea-ward and the channels cut through it by the rivers are more or less deep, according to the volume of water conveyed by them and the rapidity of the current. The nearer the mouth of a river, the deeper is the channel and the softer the bottom. If a ship is in a channel, the ground will become very soft, and the depth increase, as the land is approached; but, if not in one, the ground will become very

hard, and the depth decrease. Wherever the ground is quite soft, the opening, which is apparently an opening between islands, may be steered for in safety, and it will soon be found to be the entrance to a river.

The general aspect of the Sundarbans gradually changes as one travels west to east from the Hooghly towards the Meghnā, and the whole tract may be divided into three portions, viz., (1) the land from the Hooghly to the Jamunā and Kālindī rivers included in the 24-Parganas, (2) the tract between the Jamunā and Baleswar lying in Khulnā, and (3) the tract between the Baleswar or Haringhātā and the Meghnā which is comprised in Backergunge. The land near the two boundary rivers, the Hooghly and Meghnā, *i.e.*, in the 24-Parganas and Backergunge, is comparatively high, but it slopes downwards towards the middle portion, *i.e.*, Khulnā and the south-east of the 24-Parganas. The middle tract is low and swampy, and at no very distant period was doubtless one great marsh. Indeed, the maps of the old surveys conducted by Major Rennell and others, between 1764 and 1772, show a large tract of country between the Jamunā and the lower part of the Ganges as a morass intersected by deep creeks and watercourses.

The superficial aspect of the three divisions is what might be expected from their physical character. The belt of cultivated land from the Hooghly to the Jamunā in the 24-Parganas is surrounded by large embankments to keep out the salt water; the land is comparatively high, and dotted with small hamlets, or single huts surrounded by little gardens. In the marshy tract of the Khulnā Sundarbans, between the Jamunā and Baleswar, miles of low-lying half-cleared land extend without a vestige of habitation. The cultivators who till this section rarely live on or near their fields, and the latter are surrounded with low embankments. The third division, *i.e.*, the Backergunge Sundarbans, between the Baleswar and the Meghnā, affords a pleasant change from the depressing swampy atmosphere of the Khulnā Sundarbans. The land being high, and the river water comparatively sweet, no embankments are necessary to protect the crops. The soil, too, is richer; and every well-to-do peasant has his thatched hut and granaries, surrounded by an orchard of coconut, betel-nut and other trees.

There is this marked distinction too that the Ganges and its branches have long ago left the western portion of the Sundarbans and now pour their waters further to the east. Between the Hooghly and the Jamunā the rivers are for the most part salt water rivers. The Baleswar or Haringhātā, and the rivers of the

Backergunge Sundarbans eastward of it, are all distributaries of the Ganges, and contain sweet water during most seasons, down to within a short distance of the Bay of Bengal. In the central portion the water of the rivers, though not so saline as those further to the west, is gradually becoming more brackish as the rivers are silting up at the heads and the tides come further up.

These waterways are of the first importance, as being the chief means of communication by water between Calcutta and the Eastern Bengal. All the streams are tidal, and the boats proceed on the ebb and flow of the tide. Part of the day's journey has to be made with the flow, so that the duration of the voyage depends entirely upon the success with which each tide is caught. A whole fleet of boats may be seen at the recognized anchorages waiting for the tide, and the district from which they come can be readily distinguished by the shape of the bow and stern. Some of these anchorages are far from any human habitation, but necessaries of all kinds (including water) can be obtained at a sort of floating bazar. Country boats also ply from place to place along the cross channels, some of which are so narrow and so overhung with trees that the rigging of small craft at times gets caught in the branches.

The main streams, during the inundation in the rainy season, have what are usually termed "double currents," that is, the surface down to a certain depth flows downward or southward, while below that depth the tide advances upward or northward. This is caused by the freshets sweeping down from a higher level and over-topping the flood tide from the sea. Even to skilful swimmers this treacherous double current or under-current is most dangerous. A person falling accidentally or suddenly into a stream naturally sinks at first below the surface, when the under-current drags him in one direction, while the upper current, flowing in a contrary direction, prevents his rising to the surface. The result is that he is quickly drowned, and the body is sometmies never recovered.

The Sundarbans present several peculiar features, which have been well described in an article *The Gangetic Delta* published in the Calcutta Review, March 1859. "In whatever light we regard the Sundarbans—whether as a tract of country possessing an abundant pachydermatous fauna, or a flora peculiar to itself, whether we look at it as the stronghold of gigantic and destructive saurians, voracious sharks and peculiar fish, whether as a tract of country of the most beautiful aspect, but at the same time most fatally pestilential—we must still view it as a curious and an anomalous tract, for here we see a surface soil composed of

black liquid mud supporting the huge rhinoceros, the sharp-hoofed hog, the mud-hating tiger, the delicate and fastidiously clean spotted deer, and nourishing and upholding large timber trees; we see fishes climbing trees; tides running in two directions in the same creek and at the same moment; we see wild hog and tigers, animals generally avoiding water, swimming across the broadcast rivers as if for amusement; in one creek a dead calm, in the next a raging sea; in some creeks the abundance of insect life is overpowering, in others close by not a living creature is to be seen; some creeks are deadly to sleep in, others perfectly free from miasma; some are dry at low water, in others, and those contiguous, no bottom can be found at ten fathoms; in one, all is fog and doubt, in the next, all is in the brightest sunshine; and many other anomalies present themselves, all rendering the Sundarbans a spot of much interest, offering as they do so many subjects for investigation and research. Most travellers in passing through this labyrinth of interminable forest, mud and water, become exceedingly wearied with the monotonous appearance of the banks of the rivers and creeks, and are only too glad when they escape into the open and cultivated northern parts of the delta, where all the breadth of the land is one vast sheet of rice cultivation."

Since the above was written the one-horned rhinoceros has become rare and is only found within the southern portion of the reserved forests. Buffaloes are also fast disappearing and at present are found only in the waste lands of the Backergunge portion of the Sunderbans. Tigers and crocodiles, however, are still as numerous as ever. A number of natives are killed every year by tigers, which break through the matted walls of dwelling-houses at night and carry off their inmates; it is a curious fact that they never carry their victims away through the side of the house by which they enter, but break through the opposite side to do so. Crocodiles are equally destructive. It is reported that they will enter houses at night, and that during the day-time they frequently move into the fields, seize cattle, and drag them into the nearest stream. Among birds more or less peculiar to this tract may be mentioned the gigantic stork or adjutant, known to the natives as *hāvgilā* or the bone swallower, on account of its swallowing its food, bone and meat together; the feathers of this bird furnish the beautiful plumes known as "marabou feathers." The reptile tribe is well represented in the Sundarbans, both venomous and non-venomous. Among the former are included salt water snakes, the deadly cobra (*Naia tripudians*), the scarcely less deadly, carpet viper (*Echis

carinata), and the large venomous snake-eater (*Ophiophagus bungarus*), which is remarkable for subsisting on its own kind, devouring its smaller brethren without mercy. Of the non-venomous snakes may be mentioned the huge python, erroneously called the Indian boa-constrictor (*Python molurus*), which attains great lengh and is capable of swallowing deer or pig whole, and the *dhāmin* (*Ptyas mucosus*), both of which are common. During the cold weather months special snake-catchers visit the Sundarbans and capture numerous snakes, which are disposed of in Calcutta.

The name Sundarbans is an incorrect English designation, the tract being properly known as Sundarban. Various etymologies have been proposed in order to explain the name. The word has been derived from *sundar* and *ban*, meaning a beautiful forest, or from *samudra-ban*, through its corrupted and vulgar form *samunda-ban*, the whole meaning the forests near the sea. Others, again, have derived the word from *Chandradwīp-ban*, *i.e.*, the Chandradwīp forest, Chandrawīp being the name of an old zamīndāri occupying the south and south-east of Backergunge. The name has also been connected with the Chandabhanda, an old forest tribe engaged in making salt, who are mentioned in a copper-plate inscription, dated 1136 Sambat or A.D. 1079, which was found at Idalpur (Adilpur) in the north of Backergunge. Grant, in his Analysis of the Finances of Bengal (1786) derives it from *Chandra bāndh* meaning the embankments of the moon, because, he says, "the richest and greatest parts of the Sundarbans are still comprised in the ancient zamīndāri of Chandradwīp (lunar territory)" and he somewhat fancifully justifies the derivation by saying that it means the offspring of the moon and refers to the tract being overflowed by the tide. It is now generally recognized that the name is derived from *sundrī-ban* or the forest of *sundrī* trees, for that tree is the commonest in the forests, and the word is sometimes pronounced locally as Sundarban. The application of the name Sundarban or Sundarbans to this tract is evidently modern. The Muhammadan historians do not use the term, but give the coast-strip from Hijli to the Meghnā the name of Bhāti, which signifies low-lands subject to the influx of the tides; and this name was used at the close of the 18th century by Mr. Grant, who says that this tract is "always included under the local description of Bhatty with all the neighbouring lowlands overflowed by the tides."*

Swatch of no ground.—A name given to a great natural depression or hole in the Bay of Bengal situated due south of the

*For much of the information contained in the above account, I am indebted to a note by Mr. D. H. E. Sunder.

Raimangal and Mālanchā estuaries. It extends nearly north by east from 21° to 21° 22′ north latitude, is five leagues in breadth, and has its northern extremity about five leagues from the land. The following account of this curious basin is quoted from the *Manual of the Geology of India* (Calcutta, 1893):—"In the sea outside the middle of the delta there is a singularly deep area, known and marked on charts as the "Swatch of no ground," in which the soundings, which are from 5 to 10 fathoms all round, change almost suddenly to 200 and even 300 fathoms. This remarkable depression runs north and south and has been referred to a local sinking; but it appears more probable, as has been shown by Mr. Fergusson, that the sediment is carried away from the spot, and deposition prevented, by the strong currents engendered by a meeting of the tides from the east and west coasts of the Bay of Bengal. Mr. Fergusson also shows that, so long as the Bay of Bengal has preserved its present form, the meeting of the tides must have favoured the formation of a spit of sand along the present position of the Sundarbans, as the lower portion of the Ganges delta is called, and that any great deposit of silt to seaward of the present line is impeded by the fine sediment being washed away by the tidal currents and deposited in the deeper parts of the Bay.

"In spite of all that has been written on this subject, the origin of the "Swatch of no ground" has by no means been cleared up. A very similar depression has been shown to exist in the bed of the shallow sea off the Indus delta, and the cause in both cases has probably been the same, a combination of an excess of subsidence with a deficiency of sedimentation, the latter due to the action of surface currents in sweeping away the silt-laden waters. It is not in accordance with what we know to suppose that, at such depths as we are dealing with, there can be any currents of sufficient velocity to account for the depression by actual erosion."

Tālā.—A village in the Sātkhirā subdivision, situated on the left bank of the Kabadak. It is the headquarters of a thāna, and contains a District Board bungalow, an English school, and a dispensary, opened in 1896, which is called the Diamond Jubilee dispensary.

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